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LIES THE MAGIC TO INSPIRE OUR
DREAMS AND THE POWER TO MAKE
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THE NEW METHOD OF
VISUAL INSTRUCTION APPLIED TO
ALL SCHOOL SUBJECTS

Dedicated to Our Boys and Girls

VOL. V

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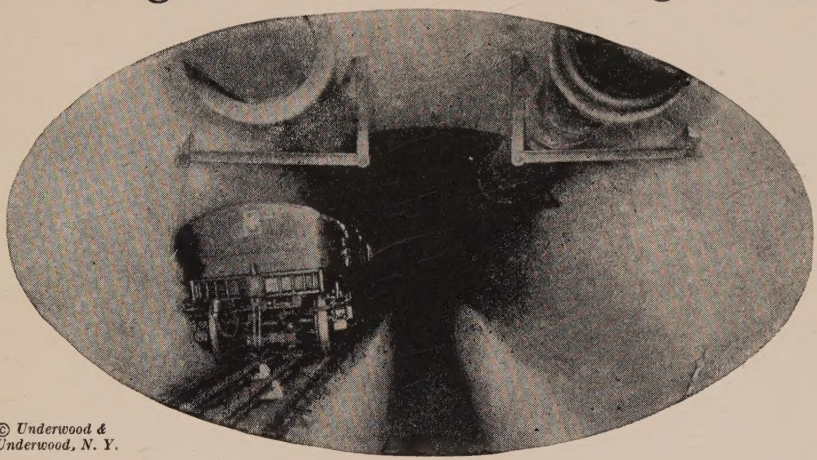
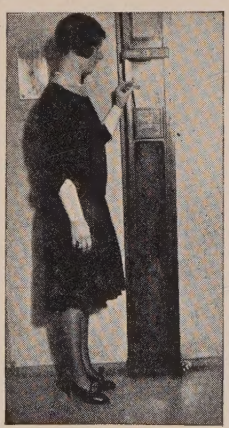
The Magical Powers of a Postage Stamp



© Underwood & Underwood, N. Y.

This picture shows how letters are carried in underground tunnels from one part of New York City to another, in cars run by electricity.

ONE of the luckiest heroes of the Arabian Nights owned a magical rug. When he wanted to go anywhere he sat on the rug, curled his feet under him and wished. And there he was, in next to no time at all! But we have something less than an inch square that could beat that rug in a race. A postage stamp will whisk a letter across land and sea, as fast as train and ships can travel, and arrive, "right side up with care," at the proper door.



© Underwood & Underwood, N. Y.

Office Building Mail Chute.

When you drop a letter into the nearest mail box, did you ever think what a lot of adventures it will have, on its travels? First it gets a ride to the local postoffice. Smash! The stamp is cancelled, and the letter dated under a steel die, and into a big canvas bag it goes. The mail sack is rushed to the railway station and hung up on an iron arm above the platform. When the mail express goes by, without stopping, an iron hook reaches out and jerks the mail sack into a car.

A Post Office on Wheels

A mail car is a traveling postoffice. To be a mail clerk, you would have to know all the places that are on the maps and many that aren't, and the railroads and ships that go to them. You would have to know them so quickly that you could "throw the mail" into the proper bags as fast as a typesetter distributes type. Letters that must change cars go into big bags that

are sorted again in terminal and junction cities. And mail for city delivery is sorted in the main postoffice by districts, and then in the branch postoffice by carrier routes.

Many letters have nice joggety rides in the country in the wagons of rural free delivery men. Some ride on street cars, on steamboats, and some on horse back to lonely mines and ranches. In the largest cities mail bags are sent to and from railway stations and steamer docks through underground tubes. The mail bags are pushed through with compressed air, on the principle of a small boy's pea shooter. A special delivery letter with a long blue stamp that costs ten cents is taken at once by a uniformed messenger on a bicycle, like a telegram. And a registered letter will get its name in a book and be signed for by the person it is sent to.

Many Ways of Travelling

Big "Pea Shooters" That Carry Letters

© Underwood & Underwood, N. Y.

Here you see the department in which mail is put into the big pneumatic carriers. These carriers are shot from one part of the building to the other by compressed air as you shoot things out of a pea shooter or drive a cork out of a pop gun. On the next page you see them emptying one of these carriers.

Helping Out Careless People

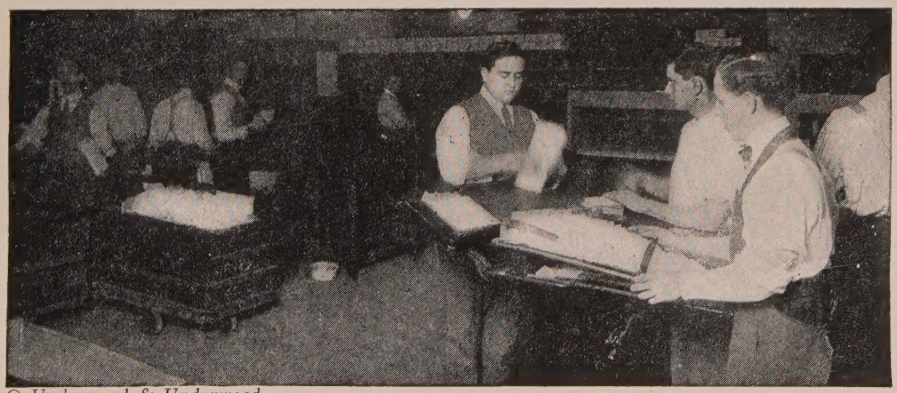
Even when people are careless, and write in the wrong states, misspell names, and leave out part of the address, that businesslike little postage stamp will do its best to deliver a letter. It first takes such a missive to the dead letter office in Washington. There a clever lady, with directories and maps, "guesses" right nearly every time where a letter ought to go, and sends it on its journey. Or she opens the letter to find out who wrote it and sends it home again, rubber stamped with "Returned for better directions." Why, that good fairy has even sent letters on to Santa Claus! But one day a letter came to her that made her put her head down on her desk and cry. On the envelope in a scrawly, baby hand was written "To my dear mama, in Heaven."

The Lady Who Solves Puzzles

The Magical Powers of a Postage Stamp

© *Keystone View*

This air mail pilot is transferring mail sacks to the dog train at Fairbanks, Alaska. These "Huskies" will carry it on into the far North.



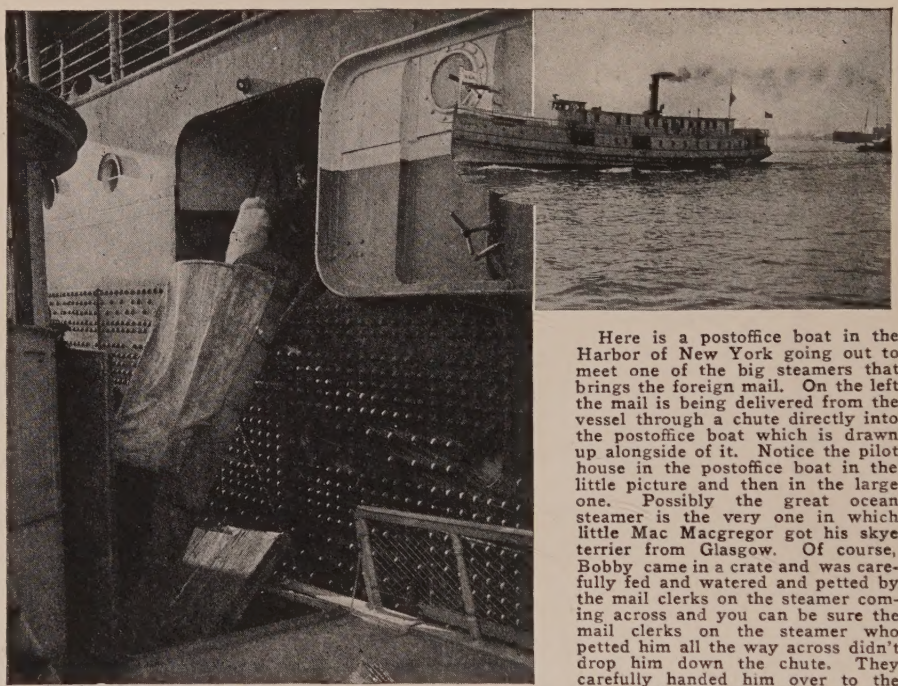
© *Underwood & Underwood*

Cancelling stamps by machinery on 20,000 letters every hour!

© *Underwood & Underwood*

Emptying letters from tube carriers from department shown on opposite page.

How Letters Get Across the Ocean



© *Underwood & Underwood, N. Y.*

Here is a postoffice boat in the Harbor of New York going out to meet one of the big steamers that brings the foreign mail. On the left the mail is being delivered from the vessel through a chute directly into the postoffice boat which is drawn up alongside of it. Notice the pilot house in the postoffice boat in the little picture and then in the large one. Possibly the great ocean steamer is the very one in which little Mac Macgregor got his skye terrier from Glasgow. Of course, Bobby came in a crate and was carefully fed and watered and petted by the mail clerks on the steamer coming across and you can be sure the mail clerks on the steamer who petted him all the way across didn't drop him down the chute. They carefully handed him over to the men on the United States postoffice boat and bade him goodbye. To these mail clerks, many of whom are also Scotchmen, the little dog must have seemed like a letter from home.

© *Underwood & Underwood, N. Y.*

Here the mail bags are opened and the letters and packages dumped on the long table you see, and then distributed to carriers who take them to the various parts of the city. While they work hard and fast, the mail clerks have a good laugh at each other now and then as things come up in their work. Notice the men who are laughing in the picture.

How Uncle Sam Carries Parcels

Now that we can send parcels by post, not to exceed seventy pounds, and not bigger than eighty-four inches measuring both ways around some of the queerest things are carried in the mails. Eggs and pies and Easter bonnets, if properly packed and stamped, are carried all over the country in Uncle Sam's mails. Once, it is said, a baby was taken to a village postoffice, weighed and tagged with parcels stamps and sent by a rural free delivery man to visit his great grandmother five miles away in the country.

Bonnets, Pies and Babies!

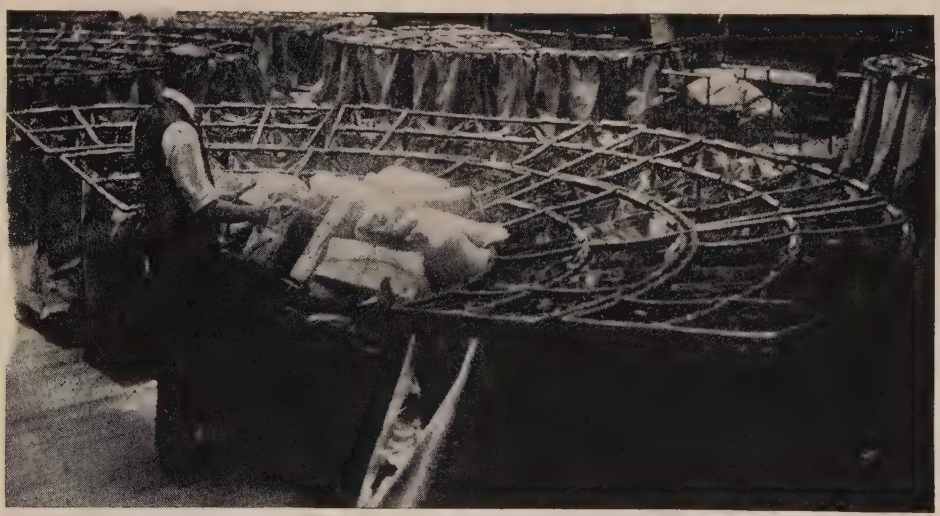
In Europe, country people send dressed poultry to city customers by mail, and city people have goats and go-carts delivered by post. They even sent such things to friends and relatives in America, before we could do it ourselves. This is the way they did it.

Little Mac Macgregor came from Glasgow, Scotland, to live in America. He would have been perfectly happy, but he did miss his little dog Bobby. So he wrote to his grandfather to send his four-legged friend to him by the first post. Mac's little pet was a skye terrier with long silky hair hanging over his deep, loving brown eyes, just like the famous Bobby of old Greyfriar's churchyard. Bobby was put into a crate and mailed. All the way across the ocean he was fed and watered and petted by all the mail clerks on the steamer. At New York he had a ride in a fine wagon lettered "Wells Fargo Express," that carried him to an express office. The express company took Bobby away out to a little town in Wisconsin, for twenty-four cents a pound. He must have felt like poet Riley's dog-woggie who "tied up his tail, in pink bombazine and went round the world."

How Mac's Dog Crossed the Ocean

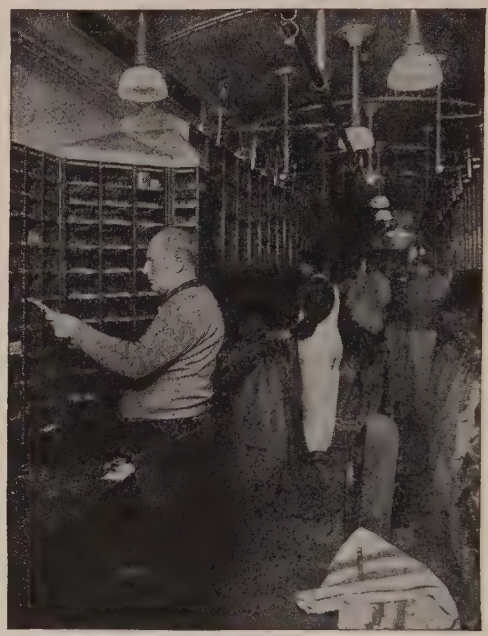
Then He Went by Express

A "Lightening" Mail Distributor



© *Underwood & Underwood*

This shows how carefully the system of distributing the mails is worked out. It is a very simple thing to arrange the bags for "throwing the mail" in this circular form around the distributor—very simple after somebody has thought of it. Somebody had to think of it first. And you see, somebody did.



© *Underwood & Underwood*

In the picture on the left, mail is being transferred direct from the New York post office into a mail car, the railroad tracks running into the big "cellar" under the building. The right-hand picture shows the inside of a mail car—the post office on wheels. Notice the pigeonholes in front of the distributor, in which he is putting letters for the different points along his route or which are to be transferred to other lines.

© *Underwood & Underwood*

Here is where Uncle Sam uses automobiles again in his great postal service. You have already seen the mail man collecting letters with an automobile. Here incoming mail for a great city is being taken from the train.

At Christmas Time

© *Underwood & Underwood*

This shows what happens to the postal clerks because so many letters and packages are sent through the mail at Christmas time. Just think how the mail clerks and the carriers have to work to get your Christmas presents and your Christmas remembrances from friends to you.

The Carrier at Work

© *Underwood & Underwood*

Here is the carrier at his work. He is something like the "postmaster on wheels." He puts all the letters and packages for his district in his bag and then sorts them out as he goes along.

A Good Play

We built a ship upon the stairs
All made of the back-bedroom chairs,
And filled it full of sofa pillows
To go a-sailing on the billows.

We took a saw and several nails,
And water in the nursery pails:
And Tom said, "Let us also take
An apple and a slice of cake";—
Which was enough for Tom and me
To go a-sailing on, till tea.

We sailed along for days and days,
And had the very best of plays;
But Tom fell out and hurt his knee,
So there was no one left but me.

ROBERT LOUIS STEVENSON

The Man in the Helmet

"Firemen * * * go inside tottering walls, into furnaces—and sometimes come out. They stay on sagging roofs. They carry down human loads that break ladder rungs. They brave explosions of oil, gas and chemicals. They slide down burning ropes and cross chasms on rotten planks—such almost impossible things every hour."

IN one of Kipling's poems is this line:

"And when the thing that couldn't has occurred." Here is a story you will think couldn't have happened. But it did and it is on the records of the New York City fire department.

In the terrible Hotel Royal fire many lives were lost, and many were saved by brave, cool headed people and by daring firemen. In a half hour the big fire trap was a ruin, all but one corner. Even the firemen had been ordered out. It was thought no living person could still be in the place. But one guest had been asleep and forgotten. He woke to find escape cut off. Shutting the door and window behind him, he stepped out on the broad window ledge, seventy feet above the pavement of a ten foot alley. On the roof of a building across the alley a fire company was playing water on the flames. There was no rope or

Incredible Feat of a Fire Captain

ladder or plank, no time to get one. Telling three firemen to hold his feet, the captain dropped over the roof, head downward, his arms stretched out on a level with the man.

"Jump!" he called. "I'll catch you."

"I weigh two hundred pounds," the man said quietly.

"I can hold you. Jump quick!"

Swinging a 200-Pound Man to Safety

The captain caught him by the wrists, but the three firemen on the roof could not pull up four hundred pounds of weight.

"Steady, now! I can swing you up." He swung the man like a pendulum, every arc longer, until the man was lifted to the level of the roof and caught. Then the firemen drew up their captain.

Firemen do such almost impossible things every hour. They go inside tottering walls, into furnaces — and sometimes come out. They stay on sagging roofs. They carry down human loads that break ladder rungs. They brave explosions of oil, gas and chemicals. They slide down burning ropes and cross chasms on rotten planks. Chiefs and captains work hardest of all. They are always in the front of the battle, leading their men into every danger. And between fires they have little rest. A captain must know every street, alley, lamp-post, torn-up pavement, fire escape, and hydrant in his district. He must know the insides of tenements, theaters, halls and factories—all the danger spots and the ways of escape.

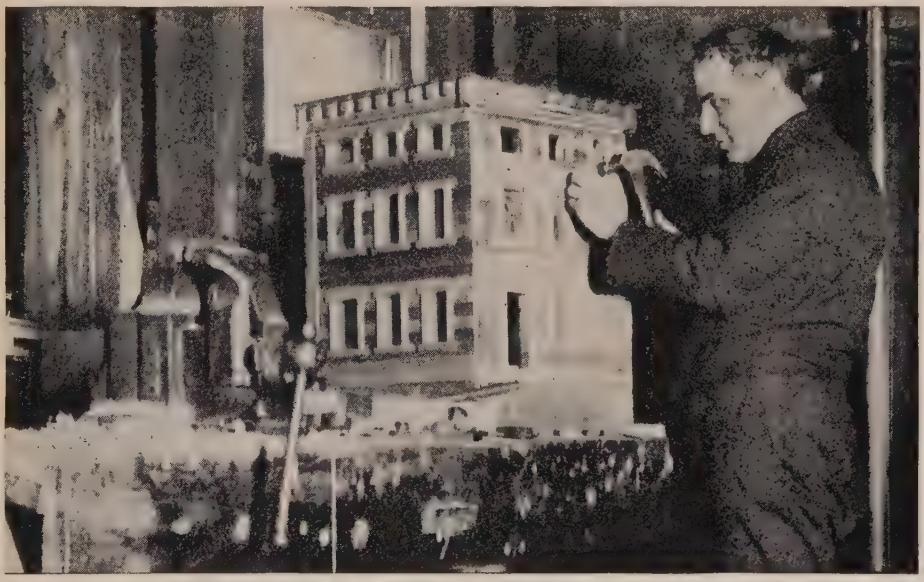
Rescuing a Suffocated Man

Carrying a two hundred-pound man down a shaky ladder is a "ticklish job." One fireman holds the ladder at the top, another goes behind the fireman with his burden to catch him if he slips, and a third braces the ladder at the middle.

24 Business Hours in a Fireman's Day

If you have ever seen a fire chief riding to a fire in his buggy or electric runabout, you may have thought he has an easy time, just giving orders. But except for two hours for dinner and to be with his family, a fire chief is always on duty, sleeping at headquarters. He may get four hours of broken sleep or none at all. In our largest cities he goes to every fire reported from two hundred boxes, in the most crowded parts of the city—where the theaters, hotels, tenements, warehouses and docks are. He is up at seven, at his desk until one, then out on a four-hour tour of inspection of engine houses. His dinner is often interrupted by an alarm. Every time he kisses his wife and children good-bye, he knows it may be for the last time. No fireman, from the chief to the newest recruit, can have

Building a Doll House for His Little Girl



This man drives the engine when the call comes for the company to go to a fire. But in his spare time he is building a doll's house for his little girl. He is up on the second floor of the fire station. Just behind him is the brass pole down which he will slide as quick as a flash if the alarm sounds. In a "jiffy" he will be on the seat of his big automobile engine, ready to go tearing down the street at a furious rate.

Libraries for Firemen

A hot day in summer finds the firemen lounging on the second floor of their station in the recreation room. This fire station is kept supplied with books by a traveling library. Those books in the corner, the billiard cues in the rack on the wall, and the billiard table at the right, suggest pleasant recreation, but the chart of alarm signals is an ever-present reminder of the hurry call that may come any minute.

An Attack from the Fire Escape

Fire escapes are not only necessary as a means of getting out of a building if a fire breaks out, but they are useful to the firemen in fighting the fire. These firemen are using this fire escape, three floors from the top of a high building, as a point of attack. One of their number has gone on farther to "place" the hose and they are waiting for the signal to follow.

Saving the Children

The two little boys are overcome by the smoke. See how limp and helpless they are. The ladder is attached to one of the big trucks. By means of the cranks, the ladder is raised and placed at just the right angle. It rides to the fire flat on its back, but when the proper time comes it springs up the side of a building from the truck like a jack-knife when you open it.

Modern Fire Fighters

© *Pacific & Atlantic*

Modern invention has given the fireman a special steel tower to combat the Demon Fire when it attacks tall buildings today. It carries the hose high into the air before shooting the water into the flames.

The tower is automatically controlled and can be adjusted to suit any emergency. The fireman can direct the play of the stream of water from his place on the truck.

This modern equipment is quite a contrast to the old fashioned fire engine drawn by prancing horses—the engine belching forth clouds of black smoke into the air, to mingle with that from the burning building.

Brave Soldiers of the Flames in Their Helmets

There is one thing more dreadful to fight than fire, and that is smoke, for this smoke is full of choking, poisonous gases. Yet the brave firemen are obliged over and over again to go into rooms thick with smoke to rescue some unfortunate. Our illustration shows a smoke helmet which is used by firemen in large cities when they are obliged to brave flame and smoke in a burning building. The helmet has connected with it an oxygen tank with enough fresh air to last an hour. The two tubes you notice lead from the helmet to a pair of breathing bags on the fireman's breast. The air the fireman breathes out passes from the breathing bag to his back, where it is forced through a regenerator, where it is purified. Then it comes back through the left tube to be breathed over again. Of course, the helmet must fit tightly on the face so that no smoke can get in. It has a soft rubber tube which fits around the face, when it is pumped up by means of the small bulb pump which you see hanging from the face plate. It is like pumping up a bicycle or automobile tire.

On the opposite side of the face plate is a handle which connects with a sponge inside the helmet. By working this handle, the fireman can mop the perspiration out of his eyes. You can imagine how dreadfully hot the fireman must be, shut up in such a coat of armor in a burning building.

Fire-Fighting in Winter

In cold weather, spray from the hose sometimes freezes fast to the firemen and their rubber clothing. The ice that forms in winter is but another item in the fireman's list of discomforts and dangers to be braved. The water from the hose freezes in mid-air, ladders become slippery and unmanageable, and the firemen themselves look like animated snow-men, as you see by the picture.

much family life. Only for some unusual deed is he given a medal. It is his business to be a hero. If he is killed, his family is now provided with a pension, in most cities.

In a poor Chicago home, a little boy once led the writer to a framed photograph of a man in a fireman's uniform. On the table below was a crushed helmet.

"My papa was a brave soldier," he said proudly.

"You mean a brave fireman?"

"Well, my mama says a fireman is a life-saving soldier. He was killed when the ladder burned and the wall fell, but he saved a baby by dropping him to the life net."

The Fireman

The heroism of the Firemen has often been the theme of the poet. The following verses are from the description of the rescue of a little golden-haired girl who was caught in a burning building:

Up goes a ladder. Through the startled throng
A hardy fireman swiftly moves along;
Mounts sure and fast along the slender way,
Fearing no danger, dreading but delay.
The stifling smoke-clouds lower in his path,
Sharp tongues of flame assail him in their wrath
But, up, still up, he goes! The goal is won!
His strong arm beats the sash, and he is gone!

Gone to his death. The wily flames surround
And burn and beat his ladder to the ground,
In flaming columns move with quickened beat
To rear a massive wall 'gainst his retreat.
Courageous heart, thy mission was so pure,
Suffering humanity must thy loss deplore;
Henceforth with martyred heroes thou shalt live,
Crowned with all honors nobleness can give.

Nay, not so fast, subdue these gloomy fears;
Behold! he quickly on the roof appears,
Bearing the tender child, his jacket warm
Flung round her shrinking form to guard from harm.
Up with your ladders! Quick! 'Tis but a chance!
Behold, how fast the roaring flames advance!
Quick! Quick! Brave spirits, to his rescue fly;
Up! Up! By heavens, this hero must not die!

Silence! He comes along the burning road,
Bearing with tender care his living load.
Aha! He totters! Heaven in mercy save
The good, true heart that can so nobly brave!
He's up again! and now he's coming fast—
One moment, and the fiery ordeal's passed—
And now he's safe! Bold flames, ye fought in vain.
A happy mother clasps her child again.

GEORGE M. BAKER

The Man at the Wheel

The Brave Indian Pilot

ON ONE issue of the Canadian ten dollar bill, there was placed the head of a living Indian. He was a pilot, one of the few who could take a boat through the Lachine rapids of the St. Lawrence. In his eagle-feather head-dress he was the hero in the pilot house of many a river steamer. His big hands gripping the polished spokes of a six-foot steering wheel, he could turn a thousand ton vessel as on a pivot. He could guide an acre of log-raft through an ice jam. Twisting and squirming in boiling rapids he could wriggle a boat like a snake through the narrow channel between foam-covered rocks. In the river villages children stared at him, and grown people pointed him out to strangers. Stories were told of his towing vessels out of the ice-choked river to the ocean, with a grunting tug boat. An ice floe might snap the chain like a cotton thread, dash the big steamer toward a reef and threaten to crush the little one, but just in time another cable was carried over the floating ice, and the pilot was off again.

The Pilots of New York Harbor

But for the work of brave pilots the thousands of ships could not enter and leave New York harbor every year. When a vessel arrives after nightfall a blue light is burned at the prow. In answer flare lights appear on the water, and business-like whistles are heard. Half a dozen pilot boats race to the "liner." The first one to hail the captain on the bridge sends a pilot up to guide the big ship to its dock. Do you think you could climb a rope ladder, loose at the lower end, to the roof of a six story house? That is the way the pilot scrambles up. It is his pride to appear on deck in derby hat and gloves, with a lighted cigar in his mouth.

Bringing in the Big Ships

The harbor pilot knows every light house, rock and sandbar, every electric and whistling buoy, every twist and turn and trick of the current in "The Narrows," the mile wide water lane to New York. He knows the comings and goings of all ships, the signals, the tracks of crossing ferry boats, the lay of the docks and slips. Through hundreds of moving water craft he noses the ocean monster to her moorings without scratching the paint on her sides. Then out again he goes in his little cockle shell of a boat to lie in the track of passing ships.

He Knows the Tricks of the Narrows

Dangers of the Pilot's Calling

It is the business of every other boat to scud out to sea, but the pilot boats must lie where their square blue flags can be seen by day, and their flare lights by night. In fair weather this is safe enough, but in gales, in snow and rain and fog they are always in danger of being run down and sunk. They must leap to every call, fight through every kind of sea and weather. The pilot must climb wind-lashed ladders, be beaten against the cliff sides of steamers, be drenched with icy spray and washed from ice-coated decks.

A Cockle Shell in a Storm

A brief news item tells the story: "Pilot boat number —— run down and sunk by a tramp steamer. All hands lost." Twenty-five pilot boats were sunk off New York harbor in three years, ten were lost in one winter blizzard. Only a small number of pilots are licensed at any one time, and these must pass rigid examinations. The crew of a pilot boat is made up of apprentices who are learning the dangerous trade. Very few pilots live to grow old. Many of them suffer from seasickness, but never complain or shirk their duty. Some of them never learn to swim. They say it would be of no use. When a pilot is drowned it is always in seas in which no one could swim.

Dangers of the Pilot's Life

Take off your hat to the man at the wheel for his short life is one of constant hardship and danger and he is one of the every day heroes of our modern life.

A Community Christmas Tree

This is what is called a "community Christmas tree." It is one of the features of Christmas celebrations in big cities. You see, the tree is outdoors. There are more than ten-thousand people in the square in which this tree was set up. It was presented to the city of Cincinnati by the president of the Cincinnati Woman's Club. It is lighted by three thousand electric lights. The picture was taken right after the mayor of Cincinnati pressed the button that turned on all these lights.

"Merry Christmas"

"Christ was born in Bethlehem
On Christmas Day in the morning."

THIS is the way an old Christmas carol begins. But it is thought now, that the baby Jesus was born in the spring. December is the rainy season in the Holy Lands, and shepherds would not have "watched their flocks by night, all seated on the ground." The earliest Christians celebrated the nativity in April or May. December twenty-fifth was finally chosen for Christ's Mass in the churches for a curious reason. With the day we got many of our dear and happy customs.

Christmas on Different Dates

Similar Celebrations Among Romans and Others

In December the sun drops lower in our sky, every day shorter and darker than the last, until the twenty-first. This is the time of the winter solstice, or sun's

The Legend of the Christmas Rose

This is a scene from an old English legend. Little Madelon heard about the birth of Jesus and wanted to bring him a gift. But she was very poor and had neither presents nor money to buy a gift. She was weeping over her sad plight when the angel Gabriel touched her hand. She looked up and lo! beautiful flowers had sprung up all about her. Madelon picked some Christmas roses. Here we see her kneeling before the Christ child offering her humble yet beautiful gift.

Among the Romans and Old Saxons

standing still. Then it turns and rises higher, making every day longer and brighter. All ancient people rejoiced at the turn of the year. In Rome the Saturnalia, or feast of Saturn, was held then. Temples were decorated with greens, feasts were eaten, and the days were given up to merry making. In northern countries the Yule feast was eaten. Yule means wheel, or turning, and the Yule festival was in honor of the return of the sun-wheel. A great yule log was burned in the banquet hall. In old Saxon England the hall at the Yuletide was decorated with holly and evergreen boughs. A boar's head was borne in with a blowing of trumpets. Peacocks, geese, chickens, mince pies and plum puddings were served, while minstrels played in the gallery. The use of the mistletoe with its mystic qualities, comes to us from the Celtic people of Ireland, Wales and Northern France.

Everywhere the early Christians tried to stop the old pagan practices. As a rebuke, they made the merriest

day of the Saturnalia and Yuletide one of fasting and prayer, in memory of the birth of the Savior. After some centuries the popular customs were purified and added to the religious ceremonies of the day. Thus Christmas became a holy day and also one of joy in the home, and of social pleasure. The long week, from Christmas eve to New Year's night, is a sort of holiday. In Catholic countries the season does not end until January sixth. This is "twelfth day," the day when the wise men came bearing gifts to the manger. So, in those countries where Christmas is devoted to church services, twelfth day is "Little Christmas," for gift making, and for the twelfth night revels. After Luther's time, Christmas was turned into a still more joyous day among German speaking peoples. Evergreen trees were decorated, lighted and hung with gifts for the children. The gifts were said to have been brought by good St. Nicholas, the Russian patron saint of the children. In Germany, the children hung up their stockings, and in

Early Christians and the Pagans

A Christmas a Week Long

Where Santa Claus Came From

Holland they put out their wooden shoes for St. Nicholas or "Santa Claus" to fill.

German Christmas customs were brought to England by Prince Albert of Coburg, who married Queen Victoria, in 1840. The Christmas trees for the royal children of Windsor Palace were copied all over the United Kingdom. German immigrants brought the children's special holiday to America. But it is to the Puritans, who kept Christmas sadly, as one of fasting and prayer, after the manner of the earliest Christians, that we owe our custom of remembering the poor on that day. It has taken many widely scattered peoples, and many centuries, to make our Christmas the joyous festival that it is today.

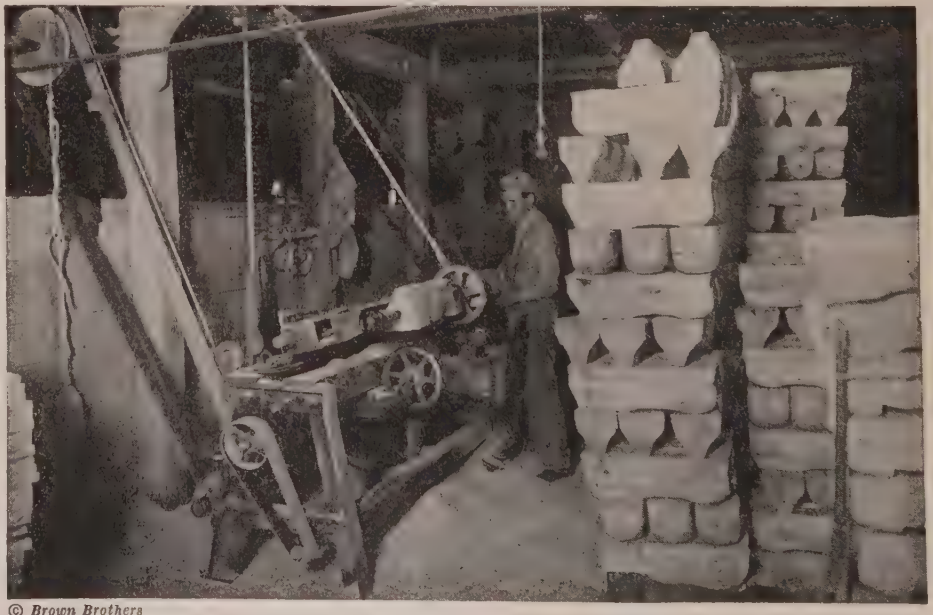
A "Christmas Tree" in the Slums

The papa and mama of these poor children cannot afford a Christmas tree, but they are making one of their own and hanging their crude little playthings on it. A bucket, a broom, with broomsticks nailed across it—that is all. But perhaps these children enjoy Christmas more than many rich children who always have so many playthings that Christmas is not the rare occasion it is to others. The joy of Christmas comes from how you feel, not from the number of things you have.

Making Little Horses and Wagons in Germany

This shows a German home in which toys are being made, not only for German children, but toys to be shipped all over the world. The Germans are great toy makers and this is one of the industries that is carried on in the homes. Notice the words on the little car—"Zur Eisenbahn"—which in English is "To the Train." That is the way a German says it is an express wagon.

The Beginnings of a Hobby Horse



© *Brown Brothers*

Those queer things corded up behind the wood turner do not look much like hobby horses, do they? Each one of the objects in the pile is four pieces of wood glued together. The whole block is placed on the turning machine, which forms it into a horse's body.

Shaving the Wooden Horses

© *Brown Bros.*

What queer things these horses are doing! They never can get them to do that even in a circus. That is because these are wooden horses, and they are—some of them—awaiting their turn to be shaved, while others have already been shaved by the man who is shaping them up on their way to the painter.

Painting and Varnishing the Hobby Horse

© *Brown Bros.*

This is the department in the wooden horse factory where the horses are painted and varnished. The man on the left dips the horse into a tank of paint, puts it up on the tray with its spirited companions to dry, and then, after it is dried, passes it on to the boy on the right, who varnishes it. See what a stack of horses there are on his right and behind him.

Putting the Spots on the Hobby Horse

These hobby horses are first painted light gray. Then they come to the department you see here where the workman puts the darker gray spots on them. He does this with a spraying arrangement known as an air brush.

Putting on the Horse's Hide

© Brown Bros.

Some hobby horses have hair, you know, and others haven't. The happy little boy at the head of this Story of Christmas has a horse with hair and with wheels under him. Here we see the hides being put on wooden horses.

Happy New Year

Copyright by Taber Prang Co.

THE BELLS

Ring out the old, ring in the new,
Ring, happy bells, across the snow;
The year is going, let him go;
Ring out the false, ring in the true.
—Alfred Tennyson.

"Happy New Year!"

Don't you love to be first to give that greeting? And just to think that, on the first of January, the earth is girdled with happy New Years! In every European country, and wherever English is spoken, the new year begins on January first. So this dear old world of ours is garlanded with a ring-around-a-rosy of wishes for happiness and success for everyone, for the coming year. How we all love the day. We can scarcely wait until morning for it to come. On New Year's Eve meetings are held in churches; there are gay parties for young people, and friends sit about merry, midnight supper tables to watch the old year out. Then, as the bells break into a joyous clamor, crowds throng the streets, blowing trumpets, throwing paper flower petals, singing songs and greeting friends. New Year's day is one of family reunions and social pleasure. It is a business holiday too. A time for paying debts, forgiving offenses, making good resolutions and "turning over a new leaf" in

A New Year's Garland of Good Wishes

the book of life. There is a very real feeling that the day marks a time of new beginnings, better intentions and better luck. "Father Time," the ancient man with the scythe and hour-glass run out, is the symbol of the year that is dead and gone. The New Year is a fat and rosy boy, merry, innocent and eager for life.

New Year's Day in a Summerland

You can hardly realize as you look at this float that it is part of a New Year's pageant. It was given by high school children in Altadena, California, in the land of perpetual summer.

Every single thing that we do now, in celebrating New Year's eve and day, was done hundreds, perhaps thousands of years ago. In Julius Caesar's time January first was a Roman holiday. New fires were kindled on altars and hearths, gifts were exchanged, family feasts and social gatherings held. In Anglo-Saxon days in old England, healths were drunk in hot spiced drinks for the *wassail* or "to your health" bowl. The making of gifts was general, from the king's palace to the peasant's cottage. Everyone kept open house and offered the best of food and drink he could afford to all comers. The custom of drinking healths in fruit punches, and from the three-handled loving cup passed around the company, is still kept up in many lands. New Year's gift making has declined because of the nearness of the day to Christmas; but social calls still live in the New Year's cards sent to near and distant friends by post. Some customs are so good, so dear, that we hope they will live forever. We love the night watch, and the bells that,

Ring out the old, ring in the new,
Ring happy bells, across the snow;
The year is going, let him go;
Ring out the false, ring in the true.

And then those millions of greetings that put a twenty-four hour girdle around the earth:

"Happy New Year!"

St. Valentine's

The Day of Loving Tokens

This is how children make valentines in physical exercise. Raise the arms sideways and upward and curve them until the fingers meet over the head. If there are a number of children playing it, the best way is to count "One—Two" and so on, for each motion.

GOOD St. Valentine had nothing to do with St. Valentine's Day. A Christian martyr in Rome, in the third century, he would be surprised if he knew that he had become the patron saint of lovers. His birthday happened to fall on the same date as an ancient pagan festival and later became confused with it.

In a very old dictionary of days it is said that the pretty customs of February fourteenth may have begun in the nature-worship of primitive peoples. In Rome, and all western Europe, spring comes earlier than with us, and many birds are busy building nests

while we are still in midwinter. From this it is thought grew the custom of young men and maidens choosing special, loving friends. A sort of lottery was held, the boys drawing girls' names from papers in a box, each getting a valentine for the year. Mr. Pepys speaks of St. Valentine's day being kept in England in the seventeenth century. Married people were often chosen in compliment by children. He says: "Little Will Mercer brought a blue paper valentine, lettered in gold with her name, and done by himself, to Mrs. Pepys, which pleased us much." Mr. Pepys received one from a "little Miss Pierce," who "composed a pretty motto of love." He made his wife a valentine gift of a jewel.

Old Valentine's Day Customs

With the invention of art-printing, beautiful colored, illuminated and lace trimmed cards and booklets came to be used. These were decorated with arrow-pierced hearts, winged cupids, wedding bells and altars, love birds and sentimental verses. The custom of sending gay valentines is kept up by the children. A valentine box in the school room is no end of fun. And young men still compliment their young women friends by an offering of bonbons or flowers in honor of the day. St. Valentine's Day, as you know, always comes on the fourteenth of February.

The Pretty Modern Valentines

Ireland's Patron Saint

THE exact birthday of Ireland's patron saint, who was born about 377 or 387 after Christ, is unknown, but March seventeenth is given to him in the calendar of saints of the Roman Catholic church. He is held in special reverence by Irish Catholics all over the world, because of his conversion of pagan Ireland to Christianity. The day is celebrated by a mass in the churches, by processions in the streets, and by evening entertainments. Everyone of Irish birth wears a real or artificial shamrock, or a bit of green ribbon to represent it.

What the Shamrock Means

This pretty member of the clover family is a native of Ireland. It is said that a three-leaved shamrock was used by St. Patrick in a sermon, to illustrate the idea of the Trinity. St. Patrick's song is sung in church on his day; and there are several popular songs in his honor, marked by Irish wit and good humor. One favorite begins:

"St. Patrick was a gentleman,
He came of dacent people;
He built a church in Dublin town
And on it put a steeple."

The jocular greeting is "It's St. Patrick's Day in the morning."

The Enchanted Isle

To Rathlin's Isle I chanced to sail
When summer breezes softly blew,
And there I heard so sweet a tale
That oft I wished it could be true.

They said, at eve, when rude winds sleep,
And hushed is ev'ry turbid swell,
A mermaid rises from the deep,
And sweetly tunes her magic shell.

And while she plays, rock, dell, and cave,
In dying falls the sound retain,
As if some choral spirits gave
Their aid to swell her witching strain.

Then, summoned by that dulcet note,
Uprising to th' admiring view,
A fairy island seems to float
With tints of many a gorgeous hue.

And glittering fanes, and lofty towers,
All on this fairy isle are seen;
And waving trees, and shady bowers,
With more than mortal verdure green.

LUKE AYLMER CONOLLY

Beautiful Easter Sunday and Its Origin

© Keystone View Co.

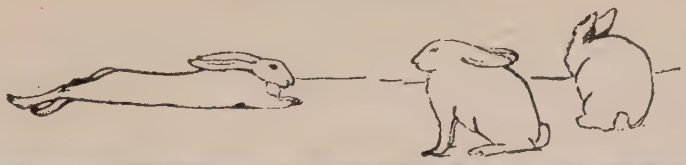
Ten Acres of Calla Lilies for Easter

The calla lily is a tropical plant related to the skunk cabbage and the jack-in-the-pulpit. It is one of southern California's innumerable crops. The little girl is picking only the white ones for Easter. A few of the yellow and spotted ones are to be found in this field also.

EASTER SUNDAY is celebrated in all Christian churches as the anniversary of the rising of the Lord from the dead. The name is from "oster" which means risen. In Russia the pious Easter morning greeting is "Christ is risen," and the answer, "He is risen, indeed." The day is a movable feast, fixed by the phase of the moon which chances to fall on March twenty-first, the date of the spring equinox. It is always the first Sunday after the first full moon in March. It may occur on any date between March twenty-second and April twenty-fifth. Easter had its origin in the old Hebrew feast of the Passover, Christ taking the place of the Paschal lamb. Very early in the history of the Christian church it became the chief religious festival of the year. The principal use of the calendar in those days was not to fix New Year's day or Christmas, but to determine the Paschal moon, and, from that, to calculate Easter so that all Christian nations should observe the festival the same day.

Meaning of the Word "Easter"

Bunny Hiding



Let us play a little bunny game. One may be the bunny and hide behind a log (chair or desk). The rest of us crouch behind a tree so as not to frighten him. On "One" all stand on tiptoe, but this scares the bunny and he quickly hides again; on "Two" the children stoop again. Repeat several times for deep knee bending. After awhile the bunny hops away and the children imitate him.

Why the Egg Stands for Easter

Easter is kept with stately ceremonies, the singing of joyous anthems and the lavish use of flowers. In some countries it is called the feast of flowers. The egg, which contains the germ of life, has always been the symbol of Easter. In nearly every Christian country colored and decorated eggs are given the children; and on Easter Monday egg-rolling, heaving and throwing games are played. In Washington the children of the capital roll eggs down the slopes of the White House grounds on Easter Monday. The president watches them from the portico, and if there are any young members of his family they sometimes join in the sport.

The Reason for the Easter Rabbit

Did you ever wonder why you hunt a bunny's nest full of eggs on Easter morning? Before they learned about the Christian religion, ancient people used to pray to many strange gods and one of them was a kind of rabbit. They thought this queer creature lived in the moon and had something to do about the waking up that comes in the spring time, so when the Christian missionaries came to tell them about Jesus and our Easter time they believed what the missionaries said and celebrated Easter, but they couldn't get the notion about the rabbit out of their heads. So they kept the rabbit as a symbol of Easter along with Easter eggs.

The Day of Practical Jokes

THE privilege of playing practical jokes, or "making fools" of others, on April first, is an ancient custom that is common in many countries. In the Middle Ages one of the miracle plays given in Easter week, which fell oftenest in April, was the sending of the Saviour on a fruitless errand of justice from one Roman officer to another. But that play had its origin, in part, in older customs of "April fooling." In far away India the Hindoos observe March thirty-first as a day for playing off good humored tricks on the unwary. The person who would be called an "April fool" in England and America, is an "April fish" in France, and a "gowk" or "cuckoo" in Scotland.

It takes a clever person to do "April fooling" successfully and so that the victim may enter as heartily into the joke as the author of it. The favorite joke in Scotland is to send another person on a nonsensical errand such as to inquire at a book seller's for "The Life of Adam's Grandfather." In Scotch villages messengers have been kept going all day, trying to deliver a letter to an imaginary person, with everyone but the victim in the joke.

The Joke of the White Lions

There have been a few historic hoaxes. In 1860, hundreds of people in London received cards of official appearance that read: "Admit bearer and friend to view the annual ceremony of washing the white lions in London Tower, Sunday, April first. Admittance only at the white gate. No charge is made, but visitors may fee the keeper a shilling." People on foot and in cabs arrived at the Towers all day, to be reminded that there were no white lions or white gate. Most of them took the "fooling" good naturedly.

The old jokes, such as a penny nailed to the sidewalk, the dropped package or pocket-book, and "April fool" candy have been used so often that people are on their guard against them. One thing that always succeeds in drawing and fooling a crowd, in a city, is to stand perfectly still on a corner and look up at the sky or down into an open manhole, as if at something of great interest. People stop to see what is attracting your attention and a crowd soon collects. You can slip out and leave them looking—at nothing. Presently someone "catches on" to the joke and the people scatter, laughing.

The Day We Give to the Trees

ARBOR, or tree-planting day is an American holiday. We thought of it ourselves, but many other countries are now following our good example. It all came about because a man wrote a book. school children, in his home state of Nebraska. More than a million trees were planted that year in this almost treeless state. Kansas, also a prairie state, followed the example. By 1890 thirty-two

The First Two Steps

1. Dig a hole large and deep. Do not be afraid to bend the back. Leave some pulverized earth in the bottom of the hole.
2. "There gently lay the roots, and there
Sift the dark mould with kindly care.
As, round the sleeping infant's feet,
We softly fold the cradle sheet."

In "Man and Nature," written about the time of the close of the Civil war, by George P. Marsh, there was a chapter on "The Woods." When this was read by B. G. Northrup, secretary of the Board of Education of Connecticut, he was alarmed to learn that our forests were disappearing. He

Origin of Arbor Day

made a public report and called upon the people of his state to plant trees. In 1872 the Hon. J. Sterling Morton, then Commissioner of Agriculture, began the custom of tree planting by the states had adopted an Arbor Day. In some states it is now a legal, in others only a school holiday. Many state school boards publish Arbor Day manuals, and the Agricultural Department of the government in Washington issues Arbor Day Bulletins. The date varies with the climate. In Florida Arbor Day is in January; in

Arbor Day in the States

other Gulf states in February or March. Most of the Middle and Northern states observe some day in April. West Virginia has two Arbor Days, one in the spring

and one in the fall. Planting now includes not only trees but shrubs and hardy vines. A pretty idea was worked out by a city school. A long brick wall has been mantled with vines. Each vine is given the name of an American poet and the wall is called "The Wall of the American Poets." Another fine idea is to have trees planted by famous or distinguished visitors and named for them. In the manuals and bulletins selections and programs suitable for the day's celebration can be found.

The Third and Fourth Steps

3. After the roots are carefully covered, press the earth down solid as the hole is filled. Then the wind as it moves the tree will not disturb the roots.
4. Leave loose earth on top so moisture may soak in. Let the children plant nasturtium seed and thus cultivate the ground.

The Beech Tree's Petition

O leave this barren spot to me!
Spare, woodman, spare the beechen tree!
Though bush or floweret never grow
My dark unwarming shade below;
Nor summer bud perfume the dew,
Or rosy blush, or yellow hue;
Nor fruits of autumn, blossom-born,
My green and glossy leaves adorn;
Nor murmuring tribes from me derive
Th' ambrosial amber of the hive;
Yet leave this barren spot to me;
Spare, woodman, spare the beechen tree!
Thrice twenty summers I have seen
The sky grow bright, the forest green;
And many a wintry wind have stood
In bloomless, fruitless solitude,
Since childhood in my pleasant bower
First spent its sweet and sportive hour,
Since youthful lovers in my shade
Their vows of troth and rapture made;
And on my trunk's surviving frame
Carved many a long-forgotten name.
As Love's own altar honour me:
Spare, woodman, spare the beechen tree!

GEORGE P. MORRIS

May Day and Its Queens

Kindergartners Dancing Around a Maypole

WE have very nearly lost this festival. Such a pity! The Puritans thought the old customs of "Merrie England" sinful. And then, in New England, as the poet Lowell said once: "Half our May is so awfully like Mayn't," that a May queen would have had a cold in her pretty head instead of a garland around it. In Virginia, May Day could have been celebrated. In New Orleans the pleasure-loving French long kept up the old frolics.

No festival is older than this of the pagan goddess Flora. In Rome the Floralia, or flower games, were kept up for three days. Later the people of western Europe gathered flowers in fields and woods on this day. In England the people of every village "brought in the May," the white hawthorn branches, to decorate doorways. The fairest maid was chosen queen. She sat in a bower with her maids of honor. Every village green and every parish in London had its Maypole, striped spirally with black and yellow, or blue and white. On May Day the pole was topped with a little tree and fluttering banners. Three thick green wreaths, hung with bells, ringed the pole, high up. From the lowest wreath, streamers trailed far out on the ground. A ring of dancers weaving in and out, wound the

The Old English Maypole

streamers, criss-cross, on the Maypole. The afternoon was given up to a picnic dinner and to Robin Hood games of archery, foot races and other woodland sports.

You can do one pretty thing—hang May baskets. You make little rustic baskets of grass, twigs or bark, lined with moss, and filled with pussy willows, hepaticas or May flowers. You hang one on the door knob of a friend, ring the bell and run.

May Day in Greece

© Berlin Photograph Co. *Painted by L. Alma-Tadema*

The great artist and student, Alma-Tadema, tells, in his picture of May Day in ancient Greece, better than any words could do, how this spring festival was celebrated. Through an aisle of uncommon architectural beauty winds a procession of barefooted children carrying baskets filled with fragrant blossoms, young girls with flower branches in their hands, and attendants of the Court of Flora, playing on lyre, flute and cymbal, and displaying the statue of Pan, the great symbol of Nature.

In the background we notice the venerable high priest under a balustrade, surrounded by vestal virgins with palm leaves in their hands. A mass of worshippers crowd behind this group in the distant street, while the spectators shower the procession with flowers.

It was the fact that the celebration of May Day was borrowed from the Greeks and Romans that annoyed the Puritans in England. The Puritan writer, John Stubbes, in a book he wrote about things people did that he thought ought not to be done, called "The Anatomy of Abuses," speaks of "maypoles" as wicked idols about which the people "leaped and danced as the heathen did." When the Puritans had control of Parliament maypoles were forbidden. But when the enemies of the Puritans came back into power one of the first things they did was to put up a maypole 134 feet high—a pole so big that it took twelve stout British sailors to set it up on the site of what is now the Church of St. Mary's-in-the-Strand.

Why May 30 is Memorial Day

These little children from the schools of Chicago are paying their tribute to Lincoln on Memorial Day by visiting the famous statue of the great emancipator by St. Gaudens in Lincoln Park.

AT the close of the Civil War, in 1865, there was scarcely a village in the land that did not mourn its soldiers dead. In many places that year public memorial services were held. The graves of those who had fallen in battle, and who had been sent home for burial, were marked with headstones, and covered with flowers. Soldiers who were not killed, but who had returned crippled or otherwise disabled, were a constant reminder of the debt that was owed to the brave defenders of the Union. So next year "Decoration Day," as it was then called, was observed again. There was no uniformity about the date, each place selecting the day that was most convenient, and when flowers were most abundant. In 1868 General John A. Logan, Commander - in - Chief of the

Grand Army of the Republic, issued an order appointing May 30th as the day for the G. A. R. to honor fallen comrades. This day was chosen because it was the one on which the last soldier of the Union Army was "mustered out." There is no national law on the subject, but Memorial Day is now a legal holiday in most of the states. Some of the southern states have set apart a day for decorating the graves of their own Confederate soldiers. Thinner ranks of veterans march or ride in procession, every year to fife and drum war tunes; orations are delivered, bands play martial music, and upon the graves of all who have died in any of our wars are laid tributes of blossoms.

In Memory of the Brave

The Sleep of the Brave

How sleep the brave, who sink to rest
By all their country's wishes blest!
When spring, with dewy fingers cold,
Returns to deck their hallow'd mould,
She there shall dress a sweeter sod
Than fancy's feet have ever trod.

By fairy hands their knell is rung,
By forms unseen their dirge is sung:
There Honor comes, a pilgrim gray,
To bless the turf that wraps their clay;
And Freedom shall awhile repair,
To dwell a weeping hermit there.

WILLIAM COLLINS

The Day of the Flag

Copyright by A. W. Elson & Co., Boston

Her Tribute

FLAG Day is the anniversary of the day we got "Old Glory," our flag of stars and stripes. It was in 1777, nearly a year after the signing of the Declaration of Independence, that the design for a flag for the fighting colonies was adopted by the Continental Congress. There was no trouble about agreeing on the design. For nearly two years a flag of seven red and six white stripes had been used by the Light Horse Cavalry of Philadelphia. A similar flag was raised over Washington's headquarters at Cambridge, Massachusetts, in January, 1776. In the blue field, however, were the red and white crosses of St. George and St. Andrew, of England and Scotland. We still thought of ourselves as subjects of Great Britain. The flag of 1777 was in thirteen stripes, and thirteen white stars on a blue field. A committee of Congress, said to have been headed by General Washington, in blue and buff uniform, and a cocked hat, went to the house of Miss Betsy Ross, an upholsterer in Arch Street. There the first flag was designed and made. A star of six points was first cut as being easier. But Mrs. Ross, folding a paper circle in a certain way, cut the more artistic five-

Betsy Ross and "Old Glory"

pointed star with one clip of her scissors. Can you do that?

The new flag was carried in the battle of Brandywine in September, 1777. Paul Jones carried it over seas, soon after, and in February, 1778, it was saluted by the guns of the French fleet. At first a new stripe and star were added for each state admitted. Later the flag was restored to thirteen stripes, only a new star being added. There are now forty-eight stars arranged in rows. At one time the stars were in a circle. It has been proposed to return to this arrangement, with a center cluster, and one star in each corner.

June fourteenth is flag day in the schools. Very pretty programs can be arranged to celebrate it. Ask any old soldier in your town how to salute the flag in correct military style. Or a Boy Scout can tell you, because that is one of the very first things he has to learn.

Celebrating Flag Day in the Kindergarten

The Flag Goes By

Hats off!
Along the street there comes
A blare of bugles, a ruffle of drums,
A flash of color beneath the sky:
Hats off!
The flag is passing by!

Blue and crimson and white it shines,
Over the steel-tipped, ordered lines.
Hats off!
The colors before us fly;
But more than the flag is passing by:

Sea-fights and land-fights, grim and great,
Fought to make and to save the State:
Weary marches and sinking ships;
Cheers of victory on dying lips;

Days of plenty and years of peace;
March of a strong land's swift increase;
Equal justice, right and law,
Stately honor and reverend awe;

Sign of a nation, great and strong
To ward her people from foreign wrong:
Pride and glory and honor, all
Live in the colors to stand or fall.

Hats off!
Along the street there comes
A blare of bugles, a ruffle of drums:
And loyal hearts are beating high:
Hats off!
The flag is passing by!

HENRY HOLCOMB BENNETT

The Day of Independence

© *Brown Bros.*

Fourth of July Night in a City

This picture was taken on Fourth of July night in one of our large cities. What a glorious confusion of streams of fire! The sparks leap about like spray from innumerable fountains. The management of such fireworks must be in the hands of experts.

WOULD you not like to have been in Philadelphia, on July 4, 1776, the day that our republic was born? Congress was sitting in the state house with the Declaration of Independence on the table. All the brave, determined men who were to win fame by signing it were crowded about. Some were excited, some grave, some pale. To sign that paper was an act of treason to King George. If the Revolution failed every man of them, if caught, would be hanged as a traitor. Then it was that Benjamin Franklin remarked wittily:

The Pun that Helped in Our History

"We must all hang together, gentlemen, or we will be hanged separately."

Then one name after another went down. You should study those bold signatures of men who were willing to die for a political principle. Copies were made to send to each of the new states. Pennsylvania, of course, got her copy first. At noon on the eighth of July, the Declaration was read

© Pacific & Atlantic

"The Spirit of 1776"

to a great crowd of citizens, in the yard of the state house that ever afterwards was known as Independence Hall. With wild shouts men surged in to pull down the royal arms in the court room; and the old bell ringer, who was waiting in the tower, pulled the bell rope, making a joyful clamor. Cast a quarter of a century before, this bell bore on its rim the legend: "Proclaim liberty throughout the land, unto all the inhabitants thereof." For hours and hours the "Liberty Bell" was rung and crowds surged and shouted in the streets.

You know how the day was long celebrated; with bell-ringing, fireworks, orations, band music and the reading of the Declaration. After awhile, on account of the damage to life, limb and property caused by the noisiest of these demonstrations, they were dropped, as a nuisance. The use of explosives caused so many accidents, especially to children, that there grew up a widespread movement for a "Sane Fourth." We are just as patriotic as we ever were, but we show our love for the day in quieter ways. The military review, historical pageant, trade and civic processions, speeches, picnics and athletic games occupy the day in most places and the sale of fireworks is restricted. Many towns now raise a fund and employ an expert to give a really beautiful display of fireworks in a public park in the evening. Anyone who wants to hear real old-fashioned noise should be in a military post, fort, or on a naval vessel, where cannon and gun salutes are fired at sunrise, noon and sunset on the national birthday.

The Sane Fourth Movement

An Old-fashioned Fourth

This boy's condition illustrates some of the things that happen when children are allowed to celebrate the Fourth by shooting off firecrackers and doing other dangerous things.

The Day That Honors Labor

Painted by Charles S. Pearce *© H. K. Turner Co.*

The Man Who Has Found His Work

Blessed is the man that has found his work. There is a perennial nobleness and even sacredness in work. Were he ever so benighted and forgetful of his high calling, there is always hope in a man who actually and earnestly works. The true epic of our times is not "arms and the man," but "tools and the man," an infinitely wider kind of epic.—Carlyle.

LABOR DAY is the first Monday in September.

In most big cities the children know when Labor Day comes, because school begins the day after, on Tuesday. Labor Day was started in 1882 by a parade given by the Knights of Labor. Colorado, in 1887, was the first state to make it a legal holiday. Since 1897 the day has been set apart by law in most of our states. In the larger cities there are usually fine parades, with the trades represented on handsome floats. Later in the day the labor unions meet in their halls, or hold mass meetings to talk about wages, hours and other questions of importance to men in the skilled trades. In European countries, May first is usually Labor Day. There it began in 1890, in a demand for an eight-hour working day. The celebration of the day expresses the dignity and asserts the rights of all manual labor. Reforms that are wanted are announced by the trades in such huge demonstrations on Labor Day that attention is paid to them by governments and employers.

Getting Ready for Hallowe'en

© *Pacific & Atlantic*

HALLOWE'EN is the night you "bob" for apples in a tub of water, tell fortunes with roasted nuts, wear "scary" false faces and play many queer pranks. To learn all the frolics that ever have been played, and all the "spooky" notions connected with this "Eve of all Saints," you should read Burns' poem on Hallowe'en. The time has no connection with the religious festival of "All Saint's Day," November first. Rather it is all sinner's evening. Simple people long continued in old pagan beliefs. They thought that witches, ghosts and evil spirits could wander at will on this one night of the year, and do mischievous things. They tried to keep awake until after midnight, because they thought that before twelve souls could be separated from sleeping

Hallowe'en Fun

© *Keystone View*

Little Scotch lasses "bobbing" for apples on All Saints Day. They are pupils of the Royal Caledonian School, Bushy. One little girl seems about to lose her apple.

© *Keystone View*

Ducking for apples seems too boisterous a sport for the little girl—so she watches the fun.

bodies. Anything dreamed was supposed to come true; and, by certain mystic ceremonies, the future could be foretold.

Old Hallowe'en Practices

Young men and maidens were curious about the unknown persons they were to marry. To learn the name or see the face of the future husband or wife, nuts were named and burned on the grate bars, apples were eaten at midnight before looking glasses, cabbage stalks were pulled in fields, hemp seed sown, a finger dipped in clear or foul water or an empty bowl by the blindfolded, or one walked down stairs backward, carrying a mirror and a candle. These weird rites were performed in dead silence and alone, or incantation rhymes were repeated, such as:

"Hemp seed I sow thee,
Hemp seed I sow thee,
And he who is to marry me
Come after me and mow thee."

"This is How Pumpkins Look on Hallowe'en

A good deal of fun can be gained from a Hallowe'en frolic by wearing the grotesque masks that stand for evil spirits, using pumpkin lanterns, dressing up in sheet and pillow case costumes, and by reviving the old games. A variation of the Hallowe'en apple bobbing is to hang an apple from a long string, or to fasten a yard stick to the string, by the middle, with an apple on one end and a lighted candle on the other. Then if you fail to catch the apple, you must dodge before the candle burns your nose. An apple paring thrown over the left shoulder at midnight is supposed to form the initial of one's future mate. Merry and innocent pranks are always allowed the children on Hallowe'en.

To Amuse the Children

Children are learning that it is not good to celebrate Hallowe'en by rough pranks and injury to property. Hallowe'en, like other national holidays, is being more and more celebrated by pageants and other forms of amusement that are both interesting and instructive.

The Witches

Hallowe en is the witches' own night. Here are three of the haggard creatures brewing their magic pot and working their baneful spells. Perhaps they are saying, as did the witches in Macbeth:

"Double, double toil and trouble;
Fire burn and cauldron bubble.
* * * *
Eye of newt and toe of frog,
Wool of bat and tongue of dog.
Adder's fork and blind worm's sting,
Lizard's leg and owlet's wing,
For a charm of powerful trouble,
Like a hell-broth, boil and bubble.
Double, double, toil and trouble;
Fire burn and cauldron bubble.
Eye of newt and toe of frog,
Wool of bat and tongue of dog."

More Witches

Quite unlike the fearful creatures above are these rosy-cheeked, round-faced little witches in a Hallowe'en school play. Practicing for an entertainment every night after school when you want to go and play is rather "horrid," but it is such fun to dress up in queer costumes like these!

Thanksgiving Day

Last Thursday in November

Roasting the Thanksgiving Turkey

This is how Thanksgiving turkeys were roasted in the homes of the pioneers and the colonists in the days when Thanksgiving turkeys were "invented."

After the turkey was dressed it was put on a stick about the size of a ramrod, cut from an oak tree, and the ends of the stick were rested on such piles of rock as you see at either end of the fireplace. The two little boys are there, not simply to see the turkey roast, but also to see that it doesn't burn. It is their business to turn the bird from time to time, so that it will be done nice and brown. As a reward, they can smell it while it is cooking; and, of course, they will eat all they can conveniently take care of at dinner.

"THE Puritans had Thanksgiving because they almost starved, and were glad they didn't; and I like it. Some more turkey, please."

That is the way one of the boys at Plumfield Farm School, in Miss Alcott's story of "Little Men" accounted for our beautiful autumn festival. Everyone laughed and he got more turkey. Everybody at the table had grown or raised or gathered something for the dinner. That was just like the first Thanksgiving in Plymouth Colony in 1621. After much suffering and privation the Puritans had their first bountiful harvest in America. So they set aside a day of thanksgiving, of solemn prayer and feasting.

Thanksgiving at Plumfield

While Thanksgiving is a purely American festival, yet it is based

on the feast of the ingathering of the ancient Hebrews, and the harvest home supper of Merrie England. For nearly two hundred years the day was kept only in New England, each colony observing any day that was most convenient. Among the strict Puritans who kept Christmas as a day of fasting and prayer, Thanksgiving was the outlet for social pleasure. The custom was spread westward by pioneers from the east, and everyone took kindly to it. During the Civil War a day of national thanksgiving was first proclaimed. Now the President appoints a day every year. By custom this has become the last Thursday in November. Following the President's lead, the governors of the states appoint the same day. Thanksgiving day is thus made a legal holiday by annual proclamation. All over our country it is observed by church services in the morning, by family reunions and by bountiful dinners. Special programs which are often benefits for charity, are given in halls and theaters.

When the Puritans Made Merry

"And I like it." Don't you? "Some more turkey, please!"

Bringing Home the Thanksgiving Turkey

This picture shows Father bringing home the Thanksgiving turkey. Probably the little boy who is so proudly carrying the old flintlock rifle is one of a very large family, as his father has two turkeys. Turkeys grew wild in those days, so that, when a bird was wanted, all you had to do was to go out into the woods and get it.

Our First "First Lady"

From the Painting by Gilbert Stuart.
MARTHA WASHINGTON

THE people of her own day always spoke of the wife of our first president as "Lady" Washington. This was not because of her pride or splendor. She had few jewels. Her house was not a palace in size or furnishings. Her dress and manner of living were only those of the wife of a wealthy Virginia planter. But so truly was she the first lady of the land in nobility of character, kind heart and gracious manners that the title fitted her. In no royal court of the old world was there to be found truer dignity, finer courtesy, more elegant taste, or better talk about things worth while, than in our president's mansion in Philadelphia.

Title a Tribute to Character

What "Lady" Washington Meant

We use the word "lady" carelessly, today. In her day the word meant a woman of good birth and breeding. But for Mrs. Washington the word was always spelled with a capital letter. When she met and married Colonel Washington in 1759 she was a widow of twenty-seven. A beautiful brunette, under the middle height, she was known to her neighbors about Mount Vernon as the "Dark Lady." For the next

The Happy Washington Home

fifteen years fortune smiled on her. She was the loved wife of a man of growing fame, the mistress of a large country estate, the hostess of countless admiring guests.

Martha Washington at Valley Forge

For the next eight years she relieved her husband of business and family cares, and divided her time between Mount Vernon and the

© C. Klackner. New York

Washington in Headquarters at Newburgh, by Jennie Browncombe (American b. 1850.)

Many women could wear prosperity as charmingly as did she, but only a few could choose and bear misfortune as nobly.

The Revolutionary War did not come suddenly. People had time to think which side they would take. The Washingtons, in casting their fortunes with the rebellious colonies chose hardship and danger. If the war failed its leader must fly into the wilderness, or be captured and hanged for a traitor. Death for her husband, and poverty for herself and son might be the bitter price she would have to pay, but the Dark Lady said:

"A free man must resist oppression."

"Lady Washington" to the Soldiers

camp. She wore homespun gowns, ate the coarse food and shared the rough quarters of the officers. By her cheerful courage and tireless work she helped keep the starving, freezing army together, all that bitter winter at Valley Forge. When she went about on her errands of comfort and mercy, soldiers uncovered and saluted her as Lady Washington. As the wife of the commander-in-chief of the continental army, she was as much the first lady of the land as when she ruled over American society like some gracious queen.

At sixty-five she was glad to go back to the quiet, family life at Mount Vernon that she had given up

so bravely and unselfishly nearly a quarter of a century before. She was then the silver-haired lady in the lace cap that we know in her portrait. She hoped for many peaceful years there. But in two years Washington died, and his Dark Lady drooped and faded from earth. Before she died she burned all his letters to her.

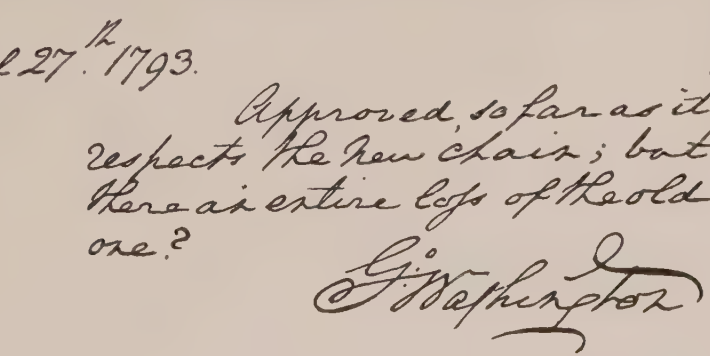
Why Washington's Letters Were Burned

If we had those letters today we should understand her and our hero better. But she was right. She gave to the people, freely and generously, the soldier, statesman and patriot. The lover and husband was hers. In her personal as in her public life she was the great lady, keeping his love for her sacred from prying eyes.

Martha Washington was not a woman of learning. Of books she knew little, of statecraft nothing. But she had good sense and sound judgment. On moral questions she was a clear and courageous thinker. And she set a high standard of manners for American society. She was leader at a time when people from the thirteen colonies first came together, and society was mixed. Some were inexperienced, others crude, others stiff. She put everyone at ease, and was herself a pattern of fine courtesy. We cannot be too proud of this model of American womanhood. In this republic there are no titles of nobility, but all women and girls may be ladies like "Lady Washington."

A True American Lady

SPECIMEN OF WASHINGTON'S HANDWRITING



This is a specimen of the handwriting of the man to whom Martha Washington devoted her life. It is a note written on a memorandum with regard to the purchase of a new chair for a lighthouse. You see how careful of every detail a great and conscientious man like Washington was, in conducting the affairs of the great nation with whose business he was entrusted.

Mary, Mother of Washington

**Mary Ball Washington,
Mother of President Washington**

ON the hills above the rippling Rappahannock, at Fredericksburg, Virginia, there is a monument upon which is cut no words beside: "Mary, Mother of Washington." It was fame enough for her that she was the mother of so good and great a man; happiness enough that Washington said: "All that I am I owe to my mother."

Washington's Tribute to His Mother

It was from her that he got his noble character, and his training for his great task, as well as his tall, strong figure, fair coloring and steady blue eyes. Before he was eleven years old his father died, and Mary Ball Washington was obliged to be father, mother, teacher and breadwinner for her little brood of five children.

George had two half-brothers who were grown up. It was the custom, in that day, for the oldest son to take most of the property. So Augustine got the fine plantation on the Pamunkey River. Lawrence married the heiress of beautiful Mount Vernon. Both were rich planters, but to the widow and younger children was left only the large farm near Fredericksburg. It had to be well managed to make a good living for the family and the Negroes. Up at dawn, the mistress rode over the fields and

A Difficult Inheritance

Washington and His Mother

This picture shows Washington visiting his mother on the family estate after the final triumph of the American army at Yorktown.

visited the cabins to see that everyone was well and busy. She kept the keys of storehouses and gave out supplies of food, clothing and tools. In the house she taught the colored women to spin, weave, sew and preserve great quantities of food. She shipped her tobacco to London, ordered goods and kept accounts. She taught her children and set their daily tasks, for schools were distant and costly. A beautiful, serious woman, sweet-voiced and kind, but firm and just, she ruled everyone and made a home of industry, peace and plenty.

Most of all she taught her children to be good and to do their duty. It was from his mother's favorite book that Washington got his famous maxims or rules of conduct. She taught him to control his hot temper, to be patient, truthful, courteous, brave, cheerful and obedient to her. His half-brother Lawrence could have got him into the British naval service as a "middy" and was sure George's talents would win him the command of a ship. But his mother had sound reasons for refusing to let him go. She thought less of what honors he might win than of his fitness for them. Wealth and fame and high place all came to him, in time, but they never changed her feeling. When the news of the last great battle of the Revolution was brought to her, she said:

How She Trained Her Son

Why She Was Not Surprised

"I am not surprised. George was always a very good boy. He would

do his duty to God and his country as he has always done it to me."

She never spoke to him or to others of his greatness, but always of his goodness. When he first visited her, after several years' absence in the war, she kissed him tenderly, said nothing of his victories but asked if he was well and happy. She did not change her simple way of living, nor give up any of her cares. Strangers who traveled far to honor the mother of the country's hero, she received in homespun gown, in hall or garden. She treated everyone alike, and was never dazzled by titles, fame or wealth. The Marquis de Lafayette was, to her, not a great French noblemen but, "my good son's good friend."

Simplicity of True Greatness

Only at the last did her children learn how brave and unselfish she was. For years, like the Spartan boy who hid the fox in his bosom, she hid the fact that she was slowly dying of a torturing disease. Unable to conceal her suffering, she lived alone, with a few old servants, so her children might not be distressed. She had the same steadfastness, unflinching courage, spirit of high command and quiet heroism as her illustrious son.

You may never see her grave. She lies in death as she dwelt in life, "among the untrodden ways." Thousands see her son's tomb at Mount Vernon every year. He would have felt it the highest honor if there had been cut upon it the words:

WASHINGTON,
SON OF MARY.

America

My country, 'tis of thee,
Sweet land of liberty,
Of thee I sing;
Land where my fathers died,
Land of the pilgrims' pride,
From every mountain side
Let freedom ring.

My native country, thee,
Land of the noble free,
Thy name I love;
I love thy rocks and rills,
Thy woods and templed hills;
My heart with rapture thrills
Like that above.

Let music swell the breeze,
And ring from all the trees
Sweet Freedom's song;
Let mortal tongues awake,
Let all that breathe partake,
Let rocks their silence break,
The sound prolong.

Our Father's God, to Thee,
Author of liberty,
To Thee we sing;
Long may our land be bright
With Freedom's holy light,
Protect us by Thy might,
Great God, our King.

SAMUEL F. SMITH

ABIGAIL ADAMS

The Portia of the Revolution

A Adams

"PORTIA" is the heroine of Shakespeare's "The Merchant of Venice." Until her husband's friend Antonio gets into trouble with a money lender she is just a merry, witty, affectionate girl. Then, as a lawyer, she defends him in court with wise brain and moving speech.

John Adams' pet name for his wife was Portia. The Revolutionary War brought out the ability and bravery of many women, but of them all Abigail Adams was the clearest thinker, boldest speaker and most fearless patriot. And of all the signers of the Declaration of Independence John Adams had the stoutest heart. He admitted, in a letter to his "dearest Portia" that he owed much to her:

"In reading history you will notice that, when you find a great character, you will find he had a mother or wife above the ordinary, and that much of his eminence is due to her."

Wives and Mothers of Great Men

A Girl Who Was Educated at Home

As a child Abigail Smith, daughter of the minister at Weymouth, Massachusetts, was too delicate to be sent to school. "That did not matter in the least," she said, "for girls were taught nothing useful." With good books and good talk at home the little girl managed to educate herself. Marrying a broad-minded man of public spirit, she could think as she pleased, and express her opinions freely. When her husband went to Philadelphia "about this sad business of rebel-

Good Books and Home Talk

lion" he wrote to her of all the doings of the Continental Congress and asked her advice. She was the finest correspondent a man could have. She did not always agree with him, and many times caused him to change his views. Spurred on by his wise, brave lady, John Adams argued and battled valiantly and put through every measure of defense. Her watchword was:

"Peace without liberty or honor would be worthless."

We know so much about both of them because John Adams had to be away from home most of the time for twenty years. Long letters, about big things took the place of talk. She made the living on a farm, brought up five children, laid by money for their old age and left her husband free to serve his country. But we hear little about that, for she was as ready to sacrifice herself as he. Never very strong, a friend was afraid she tried to do too much.

Long Letters About Big Things

"I would rather have too many cares than too few," she said. "Waters stagnate when they cease to flow."

Opinion of the Value of Good Wives

Long lonely evenings she used "to improve her mind." Her daughters had as good an education as her sons for they were to be wives and mothers, and she thought that "no man ever prospers in this world without the help and consent of his wife."

In most of her opinions Mrs. Adams was a hundred years ahead of her time. She thought that women had been as unselfish and heroic as the men, in the long war for liberty and equality and that they should share equally in the new government. "I am disappointed," she wrote her husband. "And I warn you that women will not always submit to laws that they had no hand in making."

As to the Rights of Women

A book could be filled with the wise, witty and kind sayings of this feminine Benjamin Franklin of the Revolution, who was the inspiring wife of one President, the mother of another. You can easily believe that she was, as her son, John Quincy Adams, said: "For fifty-four years the delight of my father's heart." In his own old age he wrote this tribute to her memory:

Wife of One President and Mother of Another

"My mother was an angel—a minister of blessings. She had no feeling but kindness. Her mind was firm but her temper mild and gentle. All her days on earth were filled with goodness and love."

Tribute of a Devoted Son

The Wife Who Taught Her Husband to Be President

JAMES Madison might never have been President if he hadn't married his wife. And she had not Mrs. Washington's strong character nor Mrs. Adams' fine mind. She was just beautiful, sweet and kind-hearted. Indeed, she was a sort of fairy queen, the loveliest person that can be put into a story.

About the time the Revolution was getting ready to begin, Dorothea Payne was born on a plantation in Virginia. Her father and mother were sober Quakers, but the merry baby wasn't a Quaker at all. Her dark blue eyes, curly brown hair, pretty dimples and bubbling laugh were as Irish as shamrocks. So everyone felt obliged to call her "Dolly."

By and by the family went to Philadelphia to live, lost their money, and Dolly's husband, Mr. Todd, died leaving her a widow with a little boy, at twenty-one. Such troubles! She and her mother were so poor they had to take boarders into their lovely, quiet home. But they were real ladies and were often seen at Lady Washington's levees where the

beautiful Widow Todd was much admired.

How "Dolly" Met Mr. Madison

One morning Mr. James Madison, Senator from Virginia, saw her on the street. A wealthy bachelor, twice her age, very stiff and shy, "the great little Madison" had never been known to notice ladies. But, just like a story book, he lost his heart. Mrs. Washington heard about it, and sent for the heroine of the pretty romance.

"Dolly, I hear you are to make a great match, and marry Mr. Madison."

"If—if you please, ma'am." Demure Dolly dropped her prettiest curtsy.

"You sweet minx, the President and I are very much pleased. You must make people know Mr. Madison better—make him popular."

And so they were married, and lived happily for—oh, quite forty years. Dolly blossomed out like a queen rose, in the prettiest finery ever seen in America. Rich, petted, gay, she was not spoiled. She won all hearts by her gentle sweetness. She never forgot a face or a name, an interest or a trouble of other people. The poor were fed from her table. Shabby girls were dressed for parties from her wardrobe. And she loved to sit on a nursery floor and "play dolls" with little girls. Where she was everyone was at his best and happiest, and people flocked around her like bees around a honey pot. The heart of her elderly scholar of a husband was full of love and pride in her, and she drew him into social life, and won many friends for him by her kindness and tact. She didn't know so much as he did about books, but, oh, her wise little head and warm little heart knew all about people.

In 1801 Mr. Jefferson was elected President. His wife was dead, and his daughters married and busy with their young families. People said he had two reasons for wanting Mr. Madison to be his Secretary of State. One was, of course, that he considered him a fit man for the place. The other, it is said, was so that he could ask Mrs. Madison to be hostess when there was a state dinner or ball at the White House. Then Mr. Madison followed Mr. Jefferson in office. So "Dolly" Madison was first lady of the land for sixteen years, for the two terms Jefferson served and for the two terms Madison served. History says that she made those brilliant years "the golden age of American society."

"Dolly" as First Lady of the Land

Some of them were stormy years, too. She was mistress of the White House in 1814, when the British captured and burned the capital. Like the boy on the burning deck, Dolly stood at her post until her absent husband sent word for her to fly. Under cannon fire she saved papers, silver and the Stuart portrait of Washington.

A Sweet Memory at the White House

She lived to be very old and became poor, but Congress provided for her, and when she appeared at a White House reception she was the belle of the evening at seventy.

There is a portrait of her in the President's mansion. Painted in the low-necked, short-waisted gown of Napoleon's day, she looks much like the beautiful Empress Josephine. Her dark blue eyes smile down on the scenes where she reigned, and somehow she seems still to be there.

Nancy Hanks, Mother of Lincoln

Cabin in Which Lincoln Was Born

"Wildwood lady, sweet and true,
Who gave us Lincoln and never knew."

THOSE lines are from a poem written by Harriet Monroe, a hundred years after Lincoln's birth. They are full of reverent love and tears for the mother whose brave life was only a short, rainy day that went out in darkness. The saddest thing about it was that her son was the kind of man she wanted to give to the world, and she never had the joy of knowing that she had done it.

As a girl, Nancy Hanks was "pretty as a picture, and as good and bright as you could find anywhere." This is what her cousin, Dennis Hanks, said of her when he was an old man. She was straight and slim as a poplar tree, with fine, regular features, dark hair and large hazel eyes. In appearance, mind and manners she was finer than the other members of her poverty-stricken, poorly

schooled family in the backwoods of Kentucky. Eager and ambitious for better things, she always had a wistful, serious look. There was no school to which she could go, but in some way she taught herself to read and write. And when a little son was born to her, in an unfloored cabin, she named him for his best ancestor—the grandfather, who had braved the wilds of Kentucky with Daniel Boone.

Strong in spirit, she was too frail of body for the hardships of pioneer life. She died before her time, broken hearted to think she was leaving a delicate little girl, and a son as eager and wistful as herself,

How Lincoln Learned History

to grow up in rudeness and ignorance. With all her strength she resisted, clinging to life as long as she could. Before she went she taught Lincoln to read and write. She told him stories of the few heroes of history that she had read about—Washington, and Moses and Joseph in the Bible.

"Get books, Abe. Learn all you can, and be somebody," she urged. Her ambition to "be somebody" and to make her son good and great as the heroes of old, burned in her a steady flame to the last.

Lincoln Inspired by His Mother's Spirit

Lincoln never let the pure flame of his mother's spirit go out. It lit the cabin in that first lonely winter. All the things she had said to him lay in the heart and mind of the nine year old boy. The nearest school, and that a poor one, was over four miles away, and he could not leave his sister alone while his father was in the woods chopping trees or hunting for food. Twice

When There Were No Schools

he went through Webster's old blue-backed spelling book with his cousin, who was ten years older than he. He wrote with a charred stick on the wooden fire shovel. He made ink and pens of berries and quills, and wrote on coarse, brown wrapping paper. As soon as he could write and spell well enough, he wrote a letter. It was to a minister, to ask him to come and preach a sermon at his mother's grave. He never forgot her. Her early death, from lack of care and comforts, saddened all his life. But in dying so she left him one more precious gift: pity for every helpless, suffering thing.

You know what Lincoln was. He had his mother's fine mind, her simple goodness, her gentle manners,

He Inherited Her Character

her burning desire to conquer fate and "be somebody;" her sense of high duty to one's self and to the world of men. He never said anything that he did not believe to be the truth. So, in saying this, he gave us something to think about.

"All that I am I owe to my angel mother."

Another President's Wife Who Taught Her Husband

"DOLLY" Madison's is the story of a wife who taught her scholar husband to be president. This is the story of a wife who helped her husband to get an education so that he could be President.

In the year 1826 there arrived in the mountain town of Greenville, Tennessee, a boy of eighteen named Andrew Johnson. His father had died in North Carolina when he was four years old, and his mother was unable to pay for his schooling. At eleven she put him into a tailor shop to learn the trade. Bound for seven years he managed to teach himself to read and to get a little money. As soon as he was free he took his mother to Greenville and opened a shop on the public square.

How Two People "Did Better"

Very soon the men of the town began to notice him. They said: "Andy Johnson has an old head on young shoulders." Still everyone was surprised when three years later, Eliza McCardle, the belle of the place, married him. She should have "done better" than to marry a tailor, a stranger and a man without family, with-

out money and with but little education. It stung his pride for people to think his wife had married beneath her, and Eliza lifted her head proudly and determined she would make people know her husband's worth. He had a fine mind, a wise tongue, an honest heart and was very popular. She was sure he needed only an education to make him one of the leading men of the town.

How the Mothers Helped

Their two widowed mothers lived with the young couple in a tiny brick cottage down by the mill race. Long afterwards, it was said, the mothers were heartily in favor of Eliza's plan "to make a big man of her Andy." Anyhow, they did most of the housekeeping for a few years, so the young wife, who knew but little more than her husband, could study ahead of him and be ready to help him in the evenings. She taught him to write, spell and "cipher." After a couple of years little children began to claim her time and strength, but her dear pupil was able to go on alone. He had worked hard at his trade and done so well that he was able to buy a better house for his family on the hill top. There was then a small college in the town, and the students got into the habit of stopping on the Johnson's porch in the evenings, to talk to the wise tailor whom they called "Demosthenes." Also they told their troubles and ambitions to the gentle-mannered mistress. Many a boy said: "Mr. Johnson, if I could get a wife like yours, maybe I'd amount to something, too."

It was a proud and happy day for wife and mothers when Andrew Johnson was elected a member of the town council. Then he was elected mayor, member of the state legislature, and United States Senator. During the Civil War, when Tennessee was one dreadful battlefield, he was made Military Governor of the state by President Lincoln. So well did he fill that office that, in 1864, he was elected Vice-President. By Lincoln's death he became President.

The Steps to the Presidency

For many years Mr. Johnson was very little at home. A man of small means, he was able to give so much time to the public service only because his wife staid at home, attended to all his private business, brought up and educated the children, and shared none of his honors. Her home was such a place as you may see in countless villages today. It was a plain brick house with a porch and shade trees, a kitchen garden and orchard, and a small library. She was over sixty, and her health had begun to fail, when she was called to the White House.

She was in Washington for four years, but her two married daughters took her place in public. It was an unhappy time in American history. Lincoln had been the nation's hero, and the greatest of men could not have filled his place. Mr. Johnson was misunderstood and had bitter enemies. But from all his troubles he could always go to one quiet chamber where dwelt the wife and teacher of his youth.

And so she slipped in and out of the White House and life, unknown, unhonored, except by her family and the people of a little mountain town. But American annals record no more helpful story for us all than that of the simple village girl and the unlettered tailor that she made President.

Garfield's Mother

Eliza Ballou Garfield, Mother of President Garfield

"THE President kissed his mother!"

This message was flashed over the telegraph wires, all over the country, on the day that President Garfield was inaugurated, in 1881. There had been warm interest shown by the crowds when the aged mother of the new President rode to the capital. When her good and gifted son stood up to take the solemn oath of the highest office in the gift of the people the mother wept quietly from pride and happiness.

The Tribute of a Devoted Son

The ceremony over, the President turned and kissed her tenderly. The crowd cheered. People talked about it in the street. Soldiers saluted her as she was driven

to the White House. Such a scene was never witnessed in Washington before. And then the message sped over the wires. That day "Mother" Garfield became the honored guest and idol of the nation.

A Pioneer Mother

Daughter of a long line of French Protestant ministers, Eliza Ballou married Abram Garfield, a young pioneer in the Ohio wilderness, in the twenties. There, in a one-roomed log cabin in a little clearing in the woods, her four children were born. Her eldest son was only eleven her youngest two, when her husband died. In debt, all but penniless, and with a family of helpless little ones, she was advised to sell her farm and go back east.

"What! Go away and leave my dear husband's body in the wheat field?" she cried. Wolves were in the woods. She split rails and fenced the field to protect the grave. Then she gathered her little brood around her and told them she meant to stay in the home their father had chosen for them all. They must help her.

"I can plow and plant, mother. I can milk and chop wood and work hard," said the little man of eleven.

Only One Meal for Mother

The first winter there was not enough to eat. The children got enough, but the mother ate but once a day and did the work of a man. It was never as bad as that again, but for years it was a life of poverty and toil, sweetened by love and labor and hope. Deeply religious, there was nothing stern or narrow about the mother. She had dignity, firmness, ability, ambition and courage, and a broad outlook on life. She was never soured or crushed by misfortune. The children were taught temperance, industry, love of liberty and loyalty to family and country. Her patriotism took the form of giving, from her small farm, an acre of ground for the neighborhood school house, when no man would do it.

Mother Garfield's Character

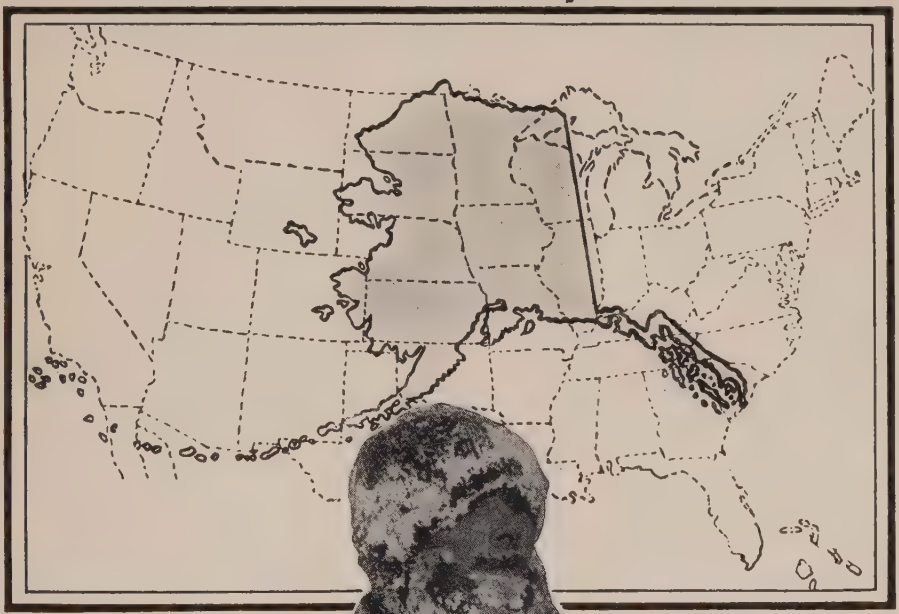
And to all the children, mother was the lode-star that drew them. The first money the oldest boy earned, he brought to her to buy baby James shoes so he could go to school. The oldest sister carried the stumbling little fellow on her back through the snowy woods. James was still a small boy in bare feet and jean trousers when he drove the canal boat horse along a tow path, and earned a dollar a day as a carpenter. And before they were all grown the boy who could "work hard" had built his mother a new house. All four children grew up into good and useful men and women. James worked his way through college, and served his country as a teacher, in the pulpit, on the battlefield, in Congress and finally in the White House.

How He Spent His First Money

When James A. Garfield stood up to take the oath of office as President, he knew that he was there because of his mother's brave and determined struggle. He knew, too, that she was so frail in body, older than her years, because the storms of life of a half century had bent and scarred and all but broken her. There were tears in his eyes, when he turned to kiss her. Tick—tick—tick, the news was tapped out over the wires. In an hour the hearts of the whole American people beat with that message of love:

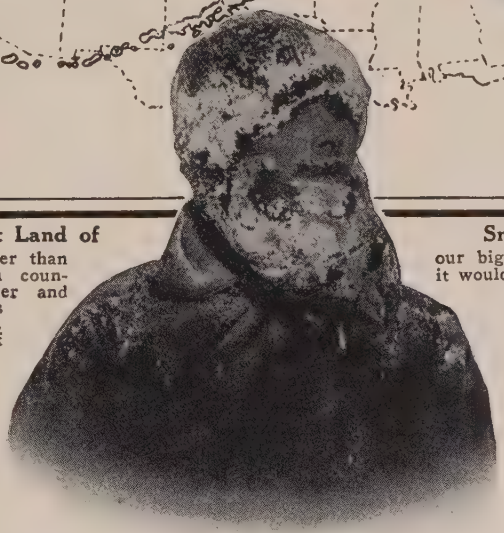
"The President kissed his mother."

The Romantic Story of Alaska



The Vast Land of Snow and Gold

Alaska is bigger than several European countries put together and many times as rich in resources. See how many of our big middle-western states it would cover up, and how it would extend from top to bottom and from coast to coast of our big country, if laid on the United States.



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ONCE upon a time, for this is a sort of fairy tale, like that of finding a precious jewel in the toad's head, the United States found a big, rich country on the bargain counter. Its 576,390 square miles of land was marked down to $7,200,000. There is a problem in arithmetic for you. How few cents is that for an acre? But everyone thought that Alaska would be dear at any price, just a dark, frozen, worthless land, pushed away up and out into the North Pacific and Arctic Oceans. When Captain Behring, a bold Danish explorer in the service of Russia, discovered this land in 1741, he found no more than 30,000 poor Indians living along the south-

The Midnight Sun

During the short Alaskan summer the sun shines far into what would be our night. After the Arctic circle is crossed, the sun, at one period of the year, seems to move in a complete circle in the sky without sinking below the horizon. If you do not know why this is true, get out your Geography and read about the rotation and revolution of the earth.

ern coast. And by 1867 Russia had made only one small settlement—a fur-trading post and Indian mission at Sitka—on one of the outer islands. The United States bought Alaska chiefly because we did not want foreign countries to own any part of the continent. We thought we might get our purchase money back from the seal fishing on the Pribilof Islands in Bering Sea.

What We Thought of Alaska Then

Then we promptly forgot our new possession and neglected it for nearly thirty years, until, with no one to watch them, selfish men by wicked and wasteful methods of hunting, had succeeded in killing off most of the great seal herds. Laws were passed to protect these interesting and valuable animals, and United States revenue cutters were sent every summer on police duty in Alaskan waters.

See, now, how one thing leads to another in the development of a new country. Since the ships had to go to protect the seal, men were sent on them to map this unknown country and to search out other sources of wealth. They found millions of acres of valuable forests mantling the mountain slopes of the southern coast; fishing banks of cod, herring, and halibut, and rivers swarming with salmon; many varieties of fur-bearing animals, and rich mines of coal, iron and copper. The climate, especially around the southern coast, was much milder than had been supposed. Timber for house-building and firewood was found nearly everywhere, up to the Arctic Circle. The soil was rich, but the summers were too short to ripen many of the farm crops, so, although people could live in comfort in many parts of Alaska, most of the food, all the clothing, domestic animals, furni-

The Treasure House and Its Golden Key

The "Golden Stair," Chilkoot Pass

© *Keystone View Co.*

Nowadays Chilkoot Pass is almost deserted for the steamer or railroad route into the interior. But in the days of the great rush of gold-seekers to the Klondike region the Pass looked like this—day after day hundreds of silent, hopeful men, marching in line with all their worldly possessions on their backs or camping by the roadside for a few hours' rest. The climb is long and difficult; the men in the picture are about one-fourth of the way up. Everything they needed had to be taken with them over the Pass, for these men were leaving all settlements and supply stations behind them when they made this dangerous journey in search of wealth.

ture, tools, and machinery would have to be brought in from long distances and at great expense. This meant that, in order to live in Alaska, people would have to have much more money than in the United States. Our bargain-counter land was a vast treasure house of useful things, but it could be opened only with a golden key.

That is why everyone looked for gold. Miners working up the coast from California had, for years, been finding small deposits and traces of the precious metal in many scattered places. A busy little mining town sprang up at Juneau, and gold was found in the upper Yukon valley. But there was no excitement until rich placer mines were discovered in the frozen gravel banks of the Klondike River, a tributary of the Yukon. This field was just over the boundary line in Canada, but it could be reached only by crossing Alaska, and other rich mines were soon found to be westward in American territory.

Gold Found in the Frozen Ground

The Rush of the Gold Seekers

What a rush of gold seekers there was in the spring of 1898! Thousands of men went by steamer from Seattle, Washington. During the short summer, when the ice was out, river boats carried men and goods up the yellow flood of the Yukon to Dawson, Canada. But for eight or nine months of the year, passengers

The Sturdy Steed of the Eskimo

Here is one of the Lapland reindeers and his Eskimo driver. See how powerful he is, and he is swift, too. "Wouldn't you like to go skimming over the snow to the sound of the bell on the reindeer's head?" You could pretend you were Santa Claus!

and freight were landed at Skagway.

Thence men traveled, afoot or by dog sledge, over the snow-filled White or Chilkoot Pass of the coast mountains. Many died on the terrible journey. Many found rich diggings, only to starve like King Midas, amid their golden treasure.

The Grim Struggle for Wealth

But, very quickly, because there was gold to pay for everything, stage coaches and freight wagons began to make regular trips between Skagway and the Yukon. Steamers ran to Nome, two years later, when gold was found in the beach sands away out on Behring Sea; then to Valdez on Prince William Sound, with overland passenger and freight lines of nearly four hundred miles to the Tanana River, when the mining region of Fairbanks was opened. Juneau, Fairbanks, Eagle and Circle City on the Yukon, and Nome are the centers of gold mining and population of Alaska today, and Skagway, Valdez, Nome, St. Michael, the river port of the Yukon and Fort Gibbon, at the mouth of the Tanana, are the gateways of travel and trade.

Then Alaskan Development Began

Counting Indians, Eskimos, and the Chinamen who work in the mines and the salmon canneries, there were not, in 1915, more than 75,000 people living in Alaska, with, perhaps, half as many more in the busy months of summer. For such a small number, the wealth produced there and the enormous volume of trade are unbelievable. Gold up to $10,000,000 has been shipped out of Alaska in one year; fish to the value of $2,000,000, and furs, aside from seal-skins, worth $1,500,000, while the great deposits of copper and coal are just beginning to be worked. The goods sent in from the United States amounted to $20,000,000 a year, which is half as much as we sell to the 40,000,000 people of Japan.

Few People But a Vast Trade

To take care of this business, an ocean cable had to be laid from

One of the Greatest Difficulties Confronting Alaskan Railways

Snow blockades are a great source of trouble to Alaskan railways. The picture shows a railroad snowplow cleaning the track of fifteen-foot drifts. Notice how far it throws the snow.

Coming into Camp at Night

© Keystone View Co.

"It was 62 minutes past freezo," as the small boy just learning to read the thermometer would say, the day the picture of these miners was taken. They are on their way back to camp after working their claims all day. Don't you think men who have such hardships deserve to find wealth?

An Arctic Traveler's "Dining Car"

This sled has a tent cover with a stovepipe going through the top. When the day is over and it is time to camp for the night, the Arctic traveler can put up the canvas top and cook and sleep in his sled, sheltered from the snow and cold.

Seattle to Juneau. Then 1,800 miles of telegraph lines were strung to connect the mining centers and ports, and put in charge of a regiment of the United States army. Telephone wires linked the scattered camps of each district. A ninety-mile railway was pushed across the mountains from Skagway to the Klondike region. The salmon canneries on Yakutal Bay laid twelve miles of rails to get their product to the coast. A railway was built along Copper River to open the copper mines, and from Cook Inlet fifty-two miles inland to the coal fields. Fairbanks built forty-five miles of railroad to connect its mines, and Nome built its "Wild Goose" system to link the mines of the district. And work was begun on the Alaska Central, a trunk line five hundred miles long.

An Alaskan Boy and His Pets

© *Keystone View Co.*

Here is Willie Campbell, almost lost in his fur coat and cap, and his team of Malamut puppies. He is holding another one, too young to put in the harness. Willie thinks he can have much more fun with his sled and dog team in frozen Alaska than would be possible in the States.

When the Government Took Charge

This big, rich, sparsely settled country had to be governed. The president appointed a governor, Congress admitted a delegate, and courts were established to enforce United States laws. The agricultural department succeeded so well in

Indian Village

Photo by Harry C. Champlin, Jr.

A typical Indian village near a salmon cannery at Yakutat. In the summer many Indians are employed in the canneries. Salmon constitutes a large part of the food of the Indians the year round, and the frame that you see at the left of the picture shows salmon drying in the sun. By this method the Indians prepare their winter supply of salmon, which they eat without cooking.

growing hay, potatoes and hardy vegetables, and in wintering cattle, that farmers began to take up homestead lands. Forest reserves were made to save the timber; and coal lands were withdrawn from entry to be worked under lease with the government, to assure reasonable prices for fuel to railroads and steamers. And there was the welcome mail-carrier on every trail, even in mid-winter, reaching the most distant camp in his dog-sledge. Then Alaska ceased to be a land of mystery and dread. Men who came "outside" in the winter months spread reports of the good schools, churches, and libraries, the newspapers, telephones, electric lights, theaters, luxury and gaiety of the large mining centers and ports, and of Alaska's wealth of strange scenic beauty.

Protecting the People's Interests

You like to travel with us, don't you? Presently we'll take a trip to Alaska, but business before pleasure, you know!

The United States surveyors who mapped Alaska about 1896 found that it was simply the northern end of our western highlands. It has the same lofty mountains bordering its Pacific Coast, a central plateau, a long range of the Rockies, and then a coastal plain sloping toward the Arctic Ocean and Behring Sea.

Still, in several ways, Alaska is quite unlike any other part of America. In our Pacific Coast States, the mountain wall is set quite two hundred miles back. Between it and the ocean lies a wide valley and a low coast range. In Alaska this mountain wall springs directly from the sea. Fringing the shore is a chain of mountainous islands. Between the islands and the coast lies a water-filled valley. Steamers use

Mighty Changes Still Going On

A Rock-Capped Ice Pillar

If you have read about our National Parks you know how the iceman takes a walk. This is the beginning of an iceman on the Martin River Glacier in Alaska.

this sheltered "Inside Passage" up to Skagway. The Pacific Coast of Alaska is much like that of California, only it happens to be dropped lower in the water and partly drowned. But this is a rising coast, with earthquake shocks and active volcanoes. Since gold was discovered, new islands have appeared in the Aleutians. Millions of years from now the Inside Passage may be lifted to a land valley and the islands to a coast range.

Grand Beauty of Its Coasts

Just as in the Sierras of California, the western slope of Alaska's mountains is deeply scored by gorge-like valleys similar to the Yosemite. But partly filled with sea-water, they form the many cliff-walled inlets from the ocean, called fiords. No other country in the world except Norway has such a beautiful fiord coast; and none other has a thousand-mile panorama of lofty mountains, with numerous, smoking volcanoes, slopes mantled with green forests, and all the high canyons, passes, and valleys filled with glacial ice.

To find glaciers on this mountainous northern coast is not surprising, but the forests need to be accounted for. As you may see on a map of the world, or a globe, Alaska lies as far north as Labrador and Greenland, "the back doors to the North Pole." Siberia, west of Alaska, is another barren desolation of frozen marshes, or tundra. But Norway and Sweden, in Europe, lie in these same latitudes, and they are populous and prosperous countries with forests, farms and cities.

The western shores of both the old world and the new have milder climates than the eastern. That is because the Gulf Stream in the At-

lantic and the Japan Current in the Pacific—broad, warm ocean rivers —flow northeastward. They warm the winds which, blowing eastward too, pick up quantities of vapor to drop on the coast in rain and snow. This heavy rainfall on the lower slopes causes a thick forest growth from California to the tip of Alaska peninsula. In the United States, the snow on the mountain tops melts in summer and feeds the countless beautiful waterfalls in the Yosemite and other valleys. There are cascades in Alaska, also, but the summers there are too short to melt all the snow of the long winter. So, the weight of the new snow, that has been added to the old every year for ages, has pressed the under layers into ice. Ice rivers, moving slowly down all the furrows of the mountains have come together and filled wide valleys. These glacial fields have been pushed out to the ocean by pressure from above.

How Alaska Got Its Forests

Work of the Great Ice Sculptors

Alaska is the finest country in the world for studying the growth and effect of glaciers, finer than Switzerland, which is small and has no seacoast. There are two kinds of glaciers: live ones and dead. The live glaciers grow from above, and give off floods of water or icebergs below. Flowing forward constantly, but too slowly to be seen, they are full of grinding, rending, cracking noises. The dead glaciers are motionless and still as death. They simply melt along their fronts and fall back a few feet every year.

The Living Glaciers and the Dead

As a glacier retreats, it leaves gravel ridges and hills, and rounded, scratched boulders behind it; then a net-work of streams with dams and rocky rapids, lakes in the hollows.

A Coaling Station on the Way to Alaska

"To the west lies a continuous chain of islands whose wooded slopes and snowy domes rise a mile above the sea. The mainland coast is beachless, the mountains springing from the water, bold, steep, craggy . . . and there are glimpses of glacier-filled gorges at their heads."

An Alaska Valley

Photo by Harry C. Champlin, Jr.

Elliott Creek Valley—150 miles by trail inland from Valdez. The stream which you see in the center of the picture has a very swift current and engineers estimate that if it were utilized it would generate 20,000 H. P.

marshes in the lowlands, and bare, worn-down and gullied mountains.

Different Styles of Glacier Work

When forests take root on the moraines, we have a country like New England or Minnesota. In California, a glacier chiseled the Yosemite Valley out of solid rock. In Norway and Alaska, ancient ice rivers carved the fiords. Every deep inlet into the Alaskan coast heads is an ice-filled gorge, the remnant of a dead glacier. Moving ice cut the rock out of that mighty channel—Lynn Canal—which, a cliff-walled, densely wooded and cascaded fiord, runs ninety miles into the land, up to Skagway.

We can learn just what happened all over the northern world in the ice age by studying the glaciers of Alaska. And by studying the gray, lava-buried, smoking cones of Alaska's live volcanoes, and its volcanic islands, we can learn what happened

Old Earth Secrets Alaska Tells

in our Cascade Mountains when, rocked by earthquake shocks, that long line of dead volcanoes was spouting flame and melted rock.

Different Climates in Alaska

Alaska has a wide range of climate. The southeastern coast is like that of our Pacific States—warm and rainy. But behind these coast mountains, just as in the United States, lies a high, dry plateau where the winters are colder and the summers hotter than on the coast. But the Rocky Mountain range bounding this plateau on the north, shuts out the Arctic cold. People can live in the Yukon valley, as you may see by finding mining towns

clear up to the Arctic Circle. And they live in Nome on the bleak shore of a sandy peninsula below Behring Strait. People can travel, too. Twice every winter the mail-carrier races his dog team up to Point Barrow, where whaling vessels lie frozen in an Arctic harbor.

All nature wakes up in May. The tundra, or frozen, mossy marshes which cover all the lowlands of Alaska, thaw a few feet and have a rank growth of reindeer moss, coarse grass, brilliant flowers, and wild berry bushes. Birds appear and fill the leafy woods of the Yukon River bottom with song. The ice is all out by June. Then steamers come up from Seattle with goods and workers, and river boats swarm up to Fairbanks, Eagle, and Dawson. Since all the work of the year must be done in four months, everyone works eighteen hours a day, while the sun shines. Even the farm crops grow faster where the days are so long. They seem to know that there is danger of frost in August, and that potatoes are worth five dollars a bushel and hay eighty dollars a ton.

A Roadside Warehouse

Photo by Harry C. Champlin, Jr.

Indian medicine man standing beside a cache built above Copper River by miners bound for the interior. These caches are built to protect supplies from animals and from the weather. Food and other things are left by the miners on their way to the interior and in this way their loads are lightened and they have provisions awaiting their return. As the Indians believe that they have a right to the white man's food, it often happens that the miners find the provisions gone and many times they starve because their food has been taken by the Indians.

Now All Aboard for Alaska

Now we will go and see this northern wonderland. You, too, as we steam along the coast, will want to stay on deck as long as the light lingers, and will grudge even the six hours given to sleep. We take a steamer at Seattle. With flags flying and band playing, the floating white palace moves out of the harbor. Clearing Puget Sound, it skirts Vancouver Island, about which we told you in the story of Canada, and seeks the water valley of the "Inside Passage."

Most tourists are content with the eleven-day round trip to Skagway, seeing only the "panhandle" of Alaska. But that has four hundred miles of the most beautiful mountain shores to be seen from the deck of a ship. To the west lies a continuous chain of islands whose wooded slopes and snowy domes rise a mile above the sea. The mainland coast is beachless, the mountains springing from

the water, bold steep, craggy, laced with cascades and deeply cut fiords. After passing Wrangell, the mountains rise in grandeur, the fiords bore deeper, and there are glimpses of glacier-filled gorges at their heads.

A stop is made at Juneau, the oldest American town and busy capital on its terraced slope, and the center of the gold mining district. Juneau is also the seat of the Territorial government, and a modern city in every respect. Then the steamer runs into Lynn Canal, so narrow in places, so steeply walled and darkly wooded, that day is turned into twilight and the stillness is broken only by the silken rustlings of the cascades. At its head lies Skagway, the best known town in Alaska. It was here that the gold-seekers of '98 began their terrible journeys over White and Chilkoot passes to the Klondike. Circling behind it is an amphitheater of Alpine scenery; naked ridges, luxuriant forests, snowy crests, glaciers, lakes, waterfalls, grassy meadows, and flowery glades. In the Indian villages one can

A Giant Totem

Photo by Harry C. Champion, Jr.

This picture shows the enormous size of some of the totem poles. The small pole on the left is the same one as shown on the opposite page, where the man can just reach to the beginning of the carving.

Indians on the Trail

Photo by Harry C. Champion, Jr.

It is usual to use horses and mules as pack animals. Here the Indians have tied their packs to the backs of their dogs. They can travel continuously for days at a time with almost no rest.

Indian Totem Pole

Photo by Harry C. Champlin, Jr.

There are a very large number of these totem poles in Alaska that are erected by the Indians. As you see, the poles are carved with strange and fantastic figures, often painted in bright colors, and while white men do not understand them, they have a great significance to the Indians.

buy hats, baskets, and blankets, and see the curious carved and painted totem poles that families set up before their cabins. Like the coat of arms of which the European nobility is so proud, these totem poles are records of long and honorable descent from the best families of the tribes.

Now for the region of famous glaciers.

Alaskan Ladies

Photo by Harry C. Champlin, Jr.

These Indian women are sitting on the bank of the Copper River watching the white man swim their cayuses through the icy waters to the other bank. It does no good to tell Indians to "look pleasant." They think there is an evil spirit in the camera.

Glaciers are seen on this journey, but the great region of ice fields begins on Glacier Bay west of Skagway, where Muir Glacier stands in a precipice three miles long and three hundred feet high. Fed by twenty-six ice rivers which flow down from a mountain crest three miles high, this crystal cliff flashes its rainbow colors in the sun.

Making His Winter Suit

There is one thing the Eskimos know how to do as well as the white man—dress skins and fashion them into clothing.

The Star City Post Office

Here is a typical, new, Alaska mining town. The post office is in the principal store. It is built of boards and logs. The stumps show how new the settlement is—there has not been time to even clear the main street of these logs. The tin cans, trunk and general disorder are telling the same story. In this wide, hard land, where existence is a struggle, men must at first spend all their time digging for gold if they are to gain what they came for. Without the team of "huskies" (dogs of all breeds trained to the harness) the picture would be incomplete.

An Alaskan Hotel in Frontier Days

Photo by Harry C. Champlin Jr.

On the main trails, road houses are built a day's journey distant from each other. This one is on the trail between Valdez and Eagle. The lower floor is used as kitchen and dining room. In the loft there is a floor made of rough lumber or logs covered with hay. On this floor logs are laid short distances apart and each "guest" is assigned a space between the logs. Here he makes up his bed by using his own blankets that he must carry himself. In these "hotels" young rabbits are used as a substitute for spring chicken, but most of the food consists of evaporated or dried fruit and canned goods.

The Monarch of the Mountain Side

Here is one of the big Alaskan bears that like the wild berries as well as the children do. He has caught a fish from the river and has raised his head to look at you before eating it.

Steamers stand well out at sea when passing this dangerous glacier. Moving forward sixty-four feet a day, giant bergs break from it with crashes like artillery, plunge headlong into the ocean, and float away.

This glacier can be seen on the longer trip to Prince William Sound. The steamer leaves the "Inside Passage" at Juneau, and runs out to the old Russian town of Sitka. Standing on the outer edge of an island, it looks westward from the blue lava slope of a volcanic peak. The warm log houses are so old that they are green with moss. Indian women sell their wares and trinkets of carved walrus ivory in the little market place. The Greek Church, with dome, clock-tower and spire, is filled with the religious art of the Greek faith.

At Mt. St. Elias, which has its base in the Pacific and its head 18,000 feet in the air, begins a region of the loftiest peaks on the continent. From there the great Alaskan range sweeps westward in a splendid semicircle to the end of Alaska Peninsula, and continues across the North Pacific in a chain of volcanic islands. Every peak and dome except Mt. McKinley, the loftiest of all, is visible from the sea. Flames from a dozen live volcanoes light up the midnight sky, and smoke plumes by day drift over vast fields of glacial ice. The Malaspina Glacier, which skirts St. Elias, fronts the ocean for fifty miles. The ice rivers which feed it can be seen winding up their gorges to the mountain crest. Of the more than two hundred glacial fields on this coast, nearly half reach the sea.

Ice Fields Lighted by Volcano Fires

Over the Gold Seekers' Trail

For those with time and money there is a long tourist trip covering all the trade routes of Alaska. A party goes by steamer to Skagway,

How the Fox Changes His Clothes

Above is a portrait of Mr. Arctic Fox in summer. In summer the color of his fur is a grayish mixture that blends into the shadows of the woods. But when the ground is white with snow he puts on a white coat as you see him in the lower picture. He is stealing up on the little ermine whose fur is so beautiful and brings such a fabulous price that it has been used to trim the coronation robes of kings. The ermine turns white in winter, too.

Of course you know why the ermine also change their clothes with the season in this way—it helps them to hide from their enemies. But how they manage it is a more difficult problem. The most that scientists can tell us about it is that the coming of cold weather affects the nervous system so that the coloring matter in the skin is changed and the new and heavier growth of fur is white.

thence by rail over the old gold-seeker trail to the White Horse rapids of the Yukon in Canada. Through lakes and gorges the river winds northward to Dawson, the Klondike region, Eagle, Circle City, and Fort Yukon. In its middle course it is like the Missouri, a dark yellow flood flowing between high bluffs. All the bottom lands are wooded with spruces, willows, and poplars. From the bluff top the land rolls away in high prairies, rising to hilly ridges or sinking to marshy tundra.

Boats are passed, for, with plenty of water from the mountains, both the main river and its large tributaries are navigable for hundreds of miles. But the little mining towns and camps are far apart, except in a few rich districts, and the country seems one vast solitude. Sometimes a group of miners is seen, or Eskimos herding the reindeer the United States brought from Lapland for them, on the tundra. Indian children gather the wild berries, keeping a sharp lookout for bears that are as fond of fruit as they. Antlered moose are to be seen in the timber and caribou on the hills.

The "Neighbors" Are Far Apart

From Fairbanks on the Tanana, the center of the best farming lands in Alaska and the largest and richest of the gold fields, one can follow the mail route westward toward

At the Chasm's Brink

© *Keystone View Co.*

"When the crevasses have arrived at their full development, they exhibit a most striking spectacle. The two bluish wells sink down into a darkness which is unfathomable by the eye; stones falling from the surface bound over the projections, and awaken dull echoes as they are lost in obscurity; a vague murmur of running water ascends from the depths; sometimes sharp gusts of biting air issue from the mouth of the abyss."—*Reclus: The Earth.*

Polar Bears in Their Icy Home

These are the big, white intelligent fellows you can sometimes see in parks and circuses, panting and rubbing up against cakes of ice provided for them. Mother, father and two playful cubs are at home, here, on a polar ice floe.

Almost as Valuable as the Gold Mines

Dressed "in sealskins and diamonds," has become proverbial for fine and expensive clothes. These are the animals whose skins are so beautiful and costly. They are Alaskan fur seals. They are not true seals, for they have more fully developed hind-legs and ears than seals proper. They are a species of sea-lion about five feet long. It is the three-year-old male whose fur is most valuable.

A Summer Resort for Seals

These are true seals whose fur is not so heavy and glossy as that of the fur seal. Great numbers of them come ashore on the mainland and the islands of Behring Sea during the summer breeding season.

Fish Acrobats

Many salmon return every year to the mountain streams of Alaska. The picture shows six of them jumping a cascade in the Ketchikan Falls, Alaska.

Cook's Inlet and see the highest mountain in America. An outstanding peak of the great Alaskan Range, Mt. McKinley, is set one hundred fifty miles inland. Rooted among lower mountains in a wide tundra, it springs 20,464 feet, or nearly four miles in the air. Here and there through its covering of snow and forests, a bold cliff of pink or fawn granite is thrown out. Now and then the clouds part to show its glacier cap, and an ice river creeps down every mighty gorge, to melt and drop a foaming torrent.

Highest Mountain in America

Between leagues of green and blossom-covered tundra, the river boat steams down the Yukon to St. Michael. There the ocean steamer is boarded for Nome. Seattle is reached in eight days in summer, at a cost of $100. But in winter, when a man is obliged to go to the States on a business trip, it takes six weeks and costs $500. He goes 600 miles by dog-sledge, across the frozen tundra to Fort Gibbon on the Tanana, and down to Fairbanks; thence by stage coach nearly four hundred miles to Valdez, on Prince William Sound, the most northern port in the world that is free of ice all the year. There he often has to wait weary days for a steamer.

The summer tourist finds Behring Sea shrouded in fog, with rain nearly every day. If the fog lifts, a sealing vessel or United States revenue cutter may be seen. Lucky indeed is the traveler who catches a glimpse of the seal herds on the Pribilof Islands, nursing their furry puppies and teaching them to swim. Bare, rocky islands loom out of this foggy sea. Some are plumed with smoke. Many are so steep, so black, so broken, that they look like ruined castles. It is a relief to come through Unimak Pass into the Pacific, and see the fishing fleets on the banks, the grassy slopes of lovely Kadiak Island, the busy salmon canneries, and the Indian villages. Then come the towering peaks, the volcanoes, the forests, glaciers, spectral icebergs, cascades, fiords, and wooded islands of the southern coast.

Eskimos in Their Kayaks

Kayaks are Eskimo canoes made of skin stretched over a light wooden frame. Notice how the Eskimos sit in them, with only part of their bodies exposed. These Eskimos are off to hunt the sea-otter near the Aleutian Islands. The best time to hunt the otter is in the thickest of an Alaskan gale and the skill with which the Eskimos control their frail craft is truly marvelous.

An Alaskan Trail

Photo by Courtesy of Harry C. Champlin, Jr.

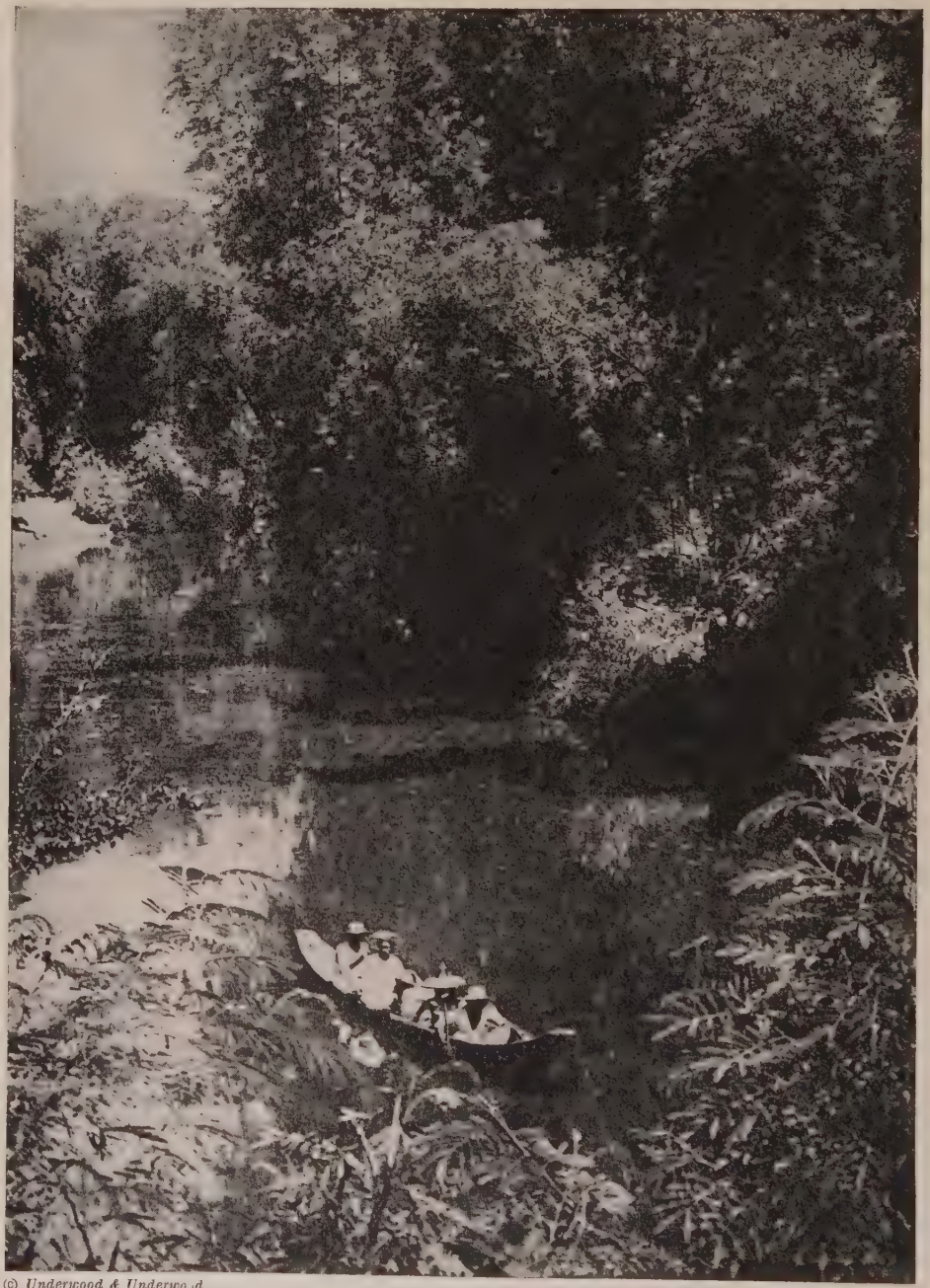
Pack train in interior following trail that winds around the side of a mountain. The packs are carried by Indian ponies, called cayuses. They have unusual endurance and seem to know instinctively how to keep on the trail. The scenery is typical of Southeastern Alaska and well illustrates the perils and difficulties of travel. The man who made this picture was killed a little later by a snowslide only a few miles from this point.

The Discovery of Alaska

(From the Speech of Charles Sumner on the Cession of Russian America to the United States.)

Behring first saw the continent of North America on July 18th, 1741, in latitude 58°28′. Looking at it from a distance "the country had terrible high mountains that were covered with snow." Two days later he anchored in a sheltered bay near a point which he called from the saint day on which he saw it, Cape St. Elias. He was in the shadow of Mount St. Elias. On landing he found deserted huts, fire-places, hewn wood, household furniture, an arrow, edge-tools of copper with "store of red salmon." Here also several birds unknown in Siberia were noticed by the faithful Steller, among which was the blue jay, of a peculiar species, now called by his name. Steering northward, Behring found himself constrained by the elbow in the coast to turn westward, and then in a southerly direction. Hugging the shore, his voyage was constantly arrested by islands without number, among which he zigzagged to find his way. Several times he landed. On one of these occasions he saw natives, who "wore breeches of seal-skins, caps of the skins of sea lions, adorned with various feathers, especially those of hawks." These "Americans," as they are called, were fishermen, without bows and arrows. They regaled the Russians with "whale's flesh," but declined strong drink. One of them, on receiving a cup of brandy, "spit it out again as soon as he tasted it and cried aloud, as if complaining to his countrymen how ill he had been used."

On the Imus River in Luzon



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"The lowlands are covered with jungles of palms, bamboos, banyan trees, shrubs, vines, grasses and small flowering plants in bewildering variety and beauty."

Uncle Sam's Island Empire

Little Lands in Big Waters

At the Door of the "Half-Way House of the Pacific"

"To tourists on ship-deck, when still far out at sea, these islands first appear as fairy mountains climbing up the sky. Then the smoke plumes of the volcanoes are seen, drifting across the sun, the snow-caps gleaming like opal-colored clouds."

ANY boy who has read Robinson Crusoe knows that islands are not just "small bodies of land entirely surrounded by water." What a funny idea! Why, Great Britain and Japan are island empires, with millions of people, and even the smallest islands are so strange and romantic that they are put into story books. Anything can happen on one, from shipwreck to pirates and buried treasure. So aren't you glad that the United States owns a number of islands so far away that we shall have to go half-way around the earth to find some of them?

Nature's Various Ways of Making Islands

First, let's take islands to pieces and see how they happened. Those neighborly ones which lie along our coast were made in several curious ways. Where shores have sunk, hills and high river banks have been left out in the water; on rising coasts they have been only partially lifted above the sea. South of New England, islands of gravel and boulders were dropped in front of the great glacier which once covered the northern world. Storm waves heaped up sand bars along our South Atlantic and Gulf Coast; and colonies of little sea animals have built up coral islands in the warm, shallow water around Florida. Newfoundland, Vancouver and the coastal islands of Alaska were lifted, as was the

Porto Rican Pickaninnies

These two Porto Rican pickaninnies are sitting on a palm tree log, drinking the sweet cocoanut milk. Cocoanut milk is very sweet, sweeter than almost anything, but a little pickaninny with a very sweet tooth would like it. The liquid in the nuts while they are still green, however, makes a refreshing drink.

mainland, by volcanic action. These are really the tops of mountains pushed above the sea.

All these are continental islands, fringes of the great land mass rising from the continental shelf But, far out in all the oceans of the world, are countless islands that are not connected with any continent.

The Lonely Islands of Our Story Books

The ocean floor, you know, is not level. Like the land, it has plains, valleys, plateaus and mountains. In the warmer parts of the South Pacific Ocean, mountains have been pushed up so near the surface of the water that corals have been able to build reefs upon them. Lovely, little lonely dots of green in a waste of blue sea, with foam breaking on white coral sand, and plumy palm trees printed on a sunny sky, they are the favorite story-book islands.

Many volcanic islands have been lifted high above the ocean in knots and smoking cones and long ranges of mountains. Iceland, New Zealand and Cuba are volcanic islands that are big enough for small countries. And Cuba is only the largest of the long chain of the West Indies. Here, near the United States, is one of the three places in the oceans of the world where, from their own deep-sea plateaus, mountain ranges, peaks and cones have sprung up in archipelagoes, or systems of mountainous islands The other groups are our Hawaiian Islands in the Pacific Ocean, and that part of the East Indies near Asia in which lie our Philippine Islands.

The West Indies look like stepping stones across a brook. If lifted above the sea their long plateau base would form a mighty curving bridge, much wider than the Isthmus of Panama, from South America almost to Florida. All our mountain systems first appeared above the water in just such chains of volcanic islands.

Stepping Stones Across the Sea

Why So Many People Live on Islands

Isn't it odd that these archipelagoes, lying as they do, thousands of miles apart, should be so much alike in climate? All on or near an east and west line with Mexico, are hot, rainy lands. Green, flowery and fruit-laden, where little clothing was needed, and food dropped from trees, they were all thickly peopled when discovered by white explorers. Friendly Carib Indians were in the West Indies, and bright, teachable tribes of the brown race on the Pacific islands. These native peoples are still in their old, island homes, mixed in with and changed by the white, black and yellow people who came to live among them.

The West Indies are such near neighbors that we have always known and loved them. As soon as the Puritans could build sailing vessels they went to Cuba for sugar. But Spain did not own all these islands. Wanted for naval bases and colonies by the early sea-faring nations, they were seized, settled and fought over by Spain, England, France, Holland and Denmark. So there are, today, the greatest differences in the people, language, customs and development of neighboring islands. Slavery was introduced into many of them and Cuba, Jamaica and Haiti have large negro populations. While Cuba is now an independent republic, and Porto Rico is under the United States flag, the people are still mostly Spanish, native Indian and Negro, and speak the Spanish language.

Who Will Buy My Oranges?

This is a Porto Rico farmer boy making "pin money" by peddling oranges.

All aboard, now, for our beautiful little tropic isle of Porto Rico. From New York or Florida, a steamer has to skirt the Bahamas—that large group of coral islands on the Continental Shelf, where Columbus first landed on San Salvador. There the water is so shallow over the sand that beautiful gardens of the sea are visible through glass-bottomed rowboats. This made Columbus believe that he was near the coast of China. Then he suddenly found himself in deep water again. South of the Bahamas the ocean-floor drops to a wide valley, to rise again in the steep rock cliffs of the West Indian plateau. Off the north coast of Porto Rico the Atlantic is 24,000 feet deep. Above the water our island rises to a height of 4,000 feet. What a mountain Porto Rico would make if it were all above the sea: Yellowstone Park piled on Mt. McKinley!

A Native Village in Porto Rico

"Each farmer built a Carib hut of palm bark and leaves. Thickly settled as it is, and with all its wealth in the soil, Porto Rico must remain a happy isle of small farms and simple, contented people."

The Mountain Top Called "Porto Rico"

Although it really is a big mountain top it doesn't look the least like one. A hundred miles long and thirty-three wide, it stretches as far as the eye can see. A belt of lowland encircles the coast. Rising by gentle slopes to an east and west ridge without peaks, it is a land of soft beauty. From palm groves and sugar fields to mountain forests, waves of tropic verdure and bloom roll from shore to shore. And down its sweet valleys thirteen hundred little streams drop singing to the sea.

"The Milkman" in Porto Rico

© *Underwood & Underwood*

Instead of delivering milk, bottled and ice-cold from a wagon, the Porto Rican milkman drives his cows to your door and milks one of them on the spot for your morning supply.

We land at San Juan, a beautiful Spanish city of fifty thousand peo-

A Porto Rico Laundry

The picture shows the interior of a laundry in Porto Rico. There are no modern labor-saving machines, for primitive methods still prevail. Notice the faces of these natives—they are colored people, but they haven't the typical American negro physiognomy.

A Government Public School

Since the United States took Porto Rico and extended our public school system over the island, enlightenment and education have done much to correct the evils of Spanish rule.

A Fourth Grade School Room

Here you see colored, mixed Spanish and Indian, and pure white children in the same school room.

ple, whose lime-washed walls, red tile roofs and palm-shaded patios stand on rising terraces above the bay. Ponce on the south coast has thirty-five thousand people. You would not think, from seeing its seaports, that Porto Rico has more than a million people, and is as thickly settled as New Jersey. Four-fifths of the population live in the country on tiny farms, and cultivate two-thirds of the land.

This was the luckiest of all the West Indian islands. Low and fertile, it had very little gold to tempt the conqueror, so peaceable and industrious Spanish peasants were allowed to settle here. They lived on friendly terms with the Carib Indians and often married them. Their taxes were light, and the money was spent in the island to build good towns and churches and to open roads. There is one broad, palm-lined military road of eighty miles, winding through lovely valleys from San Juan to Ponce, that is the joy of the motor tourist.

The Good Fortune of Having No Gold

But, under Spanish rule, the people were poor and neglected. They lived in the most primitive way, and only one in ten could read. Each farmer built a Carib hut of palm bark and leaves, used the calabash—a kind of gourd—for cooking vessels, and slept on leaves or in a hammock. Of his ten acres of land, he put five in coffee, the money crop. The other five, in sugar-cane, rice, tobacco, fruits and vegetables, only half cultivated with poor tools, furnished food and smoking material for the family. On the mountains, men had small herds of cattle and mules, or they worked the forests for cabinet woods, gums and dyes. Down every foot-path all produce had to be brought on pack mules, or on human backs or heads.

A Domestic Science Class

The dark, little girls at Ponce like to make goodies as well as American girls. The table at the right is loaded with them.

The Best Way to Improve Porto Rico

As in our own rural and backward regions, the government realized that the easiest and quickest way to better existing conditions in Porto Rico was by teaching the rising generation better ways of living and improved methods of agriculture. This is the government agricultural school at Sabana Grande.

Transformation Wrought by the United States

Since 1898, when Porto Rico came under the stars and stripes, things have changed. The people welcomed the United States with its schools, railroads, sugar mills, tobacco factories, farm machinery and local self-government. With a free market in our big country, larger crops are grown, and there is more money in the island. Trails have been widened to wagon roads; and a railroad, nearly three hundred miles long, now skirts the coast, connecting every farm road and sugar mill with the seaports.

Thickly settled as it is, and with all its wealth in the soil, Porto Rico must remain a happy isle of small farms, and simple, contented people. A holiday is one of rural pleasure or religious festival. When his day's work in the fields is done,—and every one takes a nap in the shade in the hottest hours—the young Porto Rican farmer puts on his palm-leaf hat, a clean shirt and checked gingham trousers. Tucking a cigar in his mouth and a guitar under his arm, he mounts his mule and is off to a dance, or to serenade his dark-eyed lady. Only two things disturb the warm, bright, showery days. In late summer a hurricane often sweeps over the island, strewing wreckage in its path. And, at any time, there may be an earthquake shock. There is an active volcano on the small French neighbor island of Martinique, which buried the city of St. Pierre only a few years ago. All these islands are highly volcanic, and now and then a shock shudders the entire length of the West Indian plateau, but the people take it as a matter of course.

The Farmer as a Troubadour

The Fairy Land and Its Lake of Fire

Now we must be off through the Panama Canal to the Hawaiian Islands, which stand in mid-ocean, two thousand miles west of Mexico and as far south of Alaska. We are going to see something there that we never saw before, and that is a stormy lake of fire in the cup-like top of a volcano.

Captain Cook, the English explorer who discovered these lonely islands about the time of our American Revolution, reported many things about them that sounded like fairy stories. Such a thing as a small group of islands, two thousand miles from any other land, springing from the deepest hole in the

The Sport of Surf Riding

© *Underwood & Underwood*

These are tourists in native canoes, riding the surf at Honolulu.

ocean, to mountains whose heads were lost in the clouds, had never before been heard of. And to those islands, which had every fruit of the tropics and every swimming and shell fish of the sea, he gave a population of four hundred thousand friendly natives. Near cousins of the Filipinos, they called themselves Kanakas, and were described as a handsome people, of the dusky red-brown of tarnished copper. They dressed in loin cloths and skirts of paper-mulberry bark, wore flower garlands on their heads and necklaces of seeds and shells. Good house and boat builders, farmers and fishermen, they swam like mermen, and cruised about the islands fearlessly in their frail canoes.

The Columbus of the Hawaiis

These Kanakas became Christians, learned the ways of white men, formed a government with a native king, and traded with the early miners of California. But civilization did not agree with them. In one century their number was reduced to 40,000, and four-fifths of the people on these islands today are of other races. Most of the Kanakas are educated and speak English, and many of them are rich sugar-planters.

The Hawaiian Islands are often called the "half-way house of the Pacific." In all that six-thousand-mile-wide ocean here is the only stopping place between the western ports of North America and Japan, China, the Philippine Islands, India and Australia. We were very glad when the people of these islands formed a republic and asked for annexation to the United States. They needed the protection of a big nation, and free trade in our markets, and we needed a cable station, a port of call for vessels, a naval base in Pearl Harbor near Honolulu, and Hawaii's big sugar crop.

Half-Way House of the Pacific Ocean

Approaching the Hawaiian Fairyland

To tourists on ship-deck, when still far out at sea, these islands first appear as fairy mountains climbing up the sky. Then the smoke plumes of the volcanoes are seen, drifting across the sun, the snow-caps gleaming like opal colored clouds; and below these, emerald slopes of tropic beauty fall in drapery folds to gray, rock precipices, which spring straight up two thousand feet from a foaming sea.

This chain of eight islands and four rocky islets, whose peaks rise to a height of from one to three miles, rests on a small plateau that has been pushed up from an ocean basin six miles deep. That is a total lift of 45,000 feet! And the forces which caused this greatest upheaval on earth are still at work. There are a half dozen active volcanoes, many dead but fire-scarred craters, and hundreds of square miles of mountain sides covered with barren lava rock. The deep, fertile soil which blankets all the gentler slopes, valleys and lowlands is made of lava dust and decayed tropic vegetation.

How the Volcanoes Feed the Land

Every island, however, is different, and the two sides of any one island are unlike. The mountains stand in such lofty, east and west ranges that rains from the north are stopped. So the windward sides are wet, green, and cooled by breezes from Alaskan glaciers, while the leeward sides are hot, dry and barren, except where irrigated from mountain snows. Maui and Oahu

A Hawaiian Volcano

© Underwood & Underwood
"Acres of black dust form, only to roll over and be engulfed in crimson billows."

are very largely irrigated, and are noted for their tropic beauty.

Hawaii, the largest and least populated of all these islands, is famous the world over for the grandeur of its volcanoes and lava shingled cones. Kilauea is one of the few active volcanoes in the world whose crater can safely be visited. Less than a mile high, its summit is easily reached over a slope covered with tropic verdure and bloom. Palm trees and tree-ferns fringe the brink of the crater that is eight miles wide and a thousand feet deep. This enormous basin, walled with fire-scarred cliffs, is half filled with a boiling lake, over whose heaving surface play jets of flame and sulphurous smoke. Acres of black crust form only to roll over and be engulfed in crimson billows. Waves of fire break on the high, rocky shores in showers of sparks. A column of smoke is always rising from this huge chimney, and after nightfall the sky above it is a pulsing flare of yellow and rose.

Boiling Kettle of Fire Eight Miles Wide

A Little Paris in Mid-Pacific

It is the strangest experience to return from this pit of burning to the busy, modern city of Honolulu

One-fourth of the two hundred thousand people of these islands live in the capital and chief seaport, which has million dollar hotels, palace homes in private parks, miles of palm-shaded boulevards and ocean drives, processions of automobiles, and shops where you can buy diamonds and Paris gowns. Hawaii is a colony of rich planters, and most of the large land owners have homes in the city. And there is as strange a mixture of races as is to be seen in Hongkong, China. Americans, Englishmen, Kanaka princes, Chinese and Japanese own the land, run the banks and importing business, and mingle in the social and official life of the island; and in the fields, markets and shops, Japanese, Portuguese and Kanaka laborers, gardeners and fishermen work side by side.

Citrus fruits, rice, coffee and pineapples are grown, but three-fourths of all the cultivated land is in large sugar plantations that are worked with the finest machinery and well-paid labor. The raw sugar is sent to refineries in San Francisco, and is the basis of an island trade of $50,000,000 a year. With their balmy, sub-tropic climate, scenic beauty and grandeur, and the wealth that pays for luxurious living, the Hawaiians are called "The Paradise of the Pacific." Honolulu is a charming city in which to spend a winter holiday. On its sandy beach there is sea-bathing every day in the year. And by palm-shaded motor roads you can drive all over the low mountains, where every field is in fruit or sugar, and every wayside is a lovely tangle of the tropic plants of three continents—America, Asia and Australia. Palms, tree-ferns and screw-pines grow together with ironwood, sandalwood, blue gums, bamboos, silver wattles, bananas, guavas, orchids, thickets of scarlet hibiscus, a hundred delicate ferns and a thousand small, flowering plants. With no swamps there are no reptiles, and birds are not numerous. But oh, the wild gardens! There are ravines that look like botanical parks of rare plants.

A Perfect Wilderness of Beauty

The first things you see, as you steam into Honolulu Bay, and the last, as you leave the islands behind, are native fishermen in their fleets, and boy swimmers in the surf. With the rising tide, waves fifty feet high roll in shore. Balanced on boards, these skillful and fearless swimmers, brown, yellow and white—and the Kanaka boys are the best of all—ride these dangerous combers as easily as you toboggan down a snowy hillside.

Tobogganing on the Combers

The Island of Guam

And native fishermen in gaily painted boats, paddling with shovel-shaped oars, or trimming their sails of brown matting, are the first things you see as you approach the island of Guam. This is little more than a mountain range thirty miles long, but here the United States has coal-docks, repair shops, a mail and cable station, and a company of marines in the naval base. All the trading and colonizing nations—England, Germany, France, Holland, and Japan—have islands on the lanes of ocean travel. Some that we own—the Midway and Wake Islands, and the Samoas in the South Pacific—are only dots of green in blue seas, but they are valuable as

Why Big Nations Need Little Islands

ports of call and naval bases. Guam is very useful indeed. Lying on the main steamer route from the Panama Canal to the Philippines, it has the only good harbor within hundreds of miles.

Small as it is, it has a fertile plain sloping to the western coast, where ten thousand natives live in the little capital and in a string of farming and fishing villages of palm huts. They are able to raise plenty of yams, sugar cane and fruit to eat, but when a hurricane destroys a crop there is famine. Then naval officers on the island send a cable message to the United States calling for help. We will not let these poor people under our flag starve. And here, too, we are making an experiment in government of which we are proud.

What Uncle Sam has Done for Guam

The people have nothing to sell but copra, which is dried cocoanut meats, and they are able to pay only $20,000 a year in taxes. But with this small sum the capital and seaport is kept clean and healthy, a school and hospital are open, and roads are being improved. Native boys are taught trades and employed in repair shops and shipyards, and bright girls who study hard can earn five dollars a month teaching school in the villages. The naval station and all the passing ships buy fresh fruit, vegetables and fish. So there is now more money in the island; and just a little money buys rice from Japan and flour from California, a bright ribbon for a festival, or candles to burn before the sacred images in the bare little palm-thatched huts.

A Native Filipino Hut

© *Underwood & Underwood*

This is one of the nipa-palm houses built on stilts, without nails or glass. It is picturesque but rather inconvenient.

The Philippines and Their Neighbors

Now we must be off, straight

A Filipino Rice Field

"The Filipinos will always have these islands very much to themselves, for neither white nor yellow people can live and work in such hot, wet countries." The picture shows Igorrote women working in a rice field.

Raising Cotton in Rice Terraces

In Luzon, cotton is grown on spare acres of the rice terraces shown in the next picture. Women help at this work. These rice and cotton terraces are irrigated from springs in the mountains on which they are built.

How the Igorrote Rice-Growers Build Their

The terraced pyramid in the center is nine hundred feet high and of granite. There is a rice field rocky canyon on the island of Luzon.

toward the setting sun, for a twelve hundred mile run to the Philippines. You can't miss them for they lie at the cross-roads of ocean travel in the Far East. But, in such a wilderness of islands, big and little, as lie between Asia and Australia, you may have trouble in picking them out. They are the farthest northeast of all the islands of the East Indian archipelago, lying north of Borneo and east of the China Sea.

Do you remember that the Bahamas, so near the West Indies, do not belong to them, but are coral islands off the Florida coast? Most of the islands of the East Indies rise from the continental shelves of Asia or Australia. Sumatra and Java may even have been connected with the mainland at one time, for they have the plants and animals of Indo-China. Tigers, rhinoceroses, elephants, tapirs and monkeys roam their tropic swamps and forests.

None of these fierce animals are found in the Philippines, which form a separate group rising from a submarine plateau that is surrounded on all sides by deep water. From this drowned tableland spring more than two thousand big and little mountainous islands. Most of them are small and uninhabited, but Luzon and Mindanao are as large as Pennsylvania and Virginia, and nine others are bigger than Rhode Island.

Island Tops of Hidden Mountains

Now notice this: those islands lie in a north and south chain, about eight hundred miles long by four hundred wide, and the separate islands are longest from north to south. Would you be surprised to learn that they are the tops of mountain ranges which run in the same general direction? By and by we will discover that these islands are a

Farms Along the Sides of the Mountains

on each terrace. The houses of the Igorrote rice-growers can be seen on the summit. It is in a

part of the same system as the mountains of Japan. Even the smaller islands have central north and south ridges, and peaks which drop steeply to the sea; and the larger ones have extended ranges with volcanic cones rising to eight and ten thousand feet; broad, interlying valleys, and slopes which descend to coastal plains. Earthquake shocks are frequent, just as they are in Japan; there are some active volcanoes and several regions of hot, mineral springs.

The Philippines are ten degrees hotter than the Hawaiians, for they extend to within three hundred miles of the equator. Only the higher mountain slopes, and some favored spots on the eastern coasts, are cool. Every part of them is drenched with rain from May to November, and hurricanes sweep over them toward the China Sea. And, you might say that they are drenched with tropic vegetation, too. Floods of green plants, foaming with rainbow-colored blossoms, roll down in cascades from every mountain crest. All the lowlands that are not in rice, corn, cotton, tobacco, sugar, manila hemp, fruits and indigo, are covered with jungles of palms, bamboos, banyan trees, shrubs, vines, grasses and small flowering plants in bewildering variety and beauty. Oranges, bananas, bread-fruit, cocoanuts, plantains, guavas and pineapples grow wild, or with the smallest attention, in door-yards and gardens; and cinnamon bark, cassia buds, ginger root and pepper seeds may be gathered in the forest.

Wealth of Products of the Rich Soil

So rich are these islands in food and fibre plants, and in easily handled, light building material, that more than eight million people of

The Filipino's "Mule"

© *Underwood & Underwood*

"The Filipinos live and will continue to live, much as they did four hundred years ago. They will plow their fields with rude tools, drawn by that clumsy native pet, the water buffalo."

the brown, Malay race are able to live in them with very little work.

Mixed Population of the Philippines

The people of the Philippine Islands are not all "Filipinos." This name is given only to the eight civilized, Christian tribes of Spanish-Malays of Luzon and other northern islands. In the south are the Sulus, who are Mohammedans, with native sultans and slaves; the Igorrotes, and other warlike, half-savage tribes who never did submit to Spanish rule. Scattered among the seaports are 100,000 Chinese merchants and traders, and 25,000 white people, who are mostly Spanish planters and priests, and American government officials, soldiers and school teachers. The Filipinos will always have these islands very much to themselves, for neither white nor yellow people can live and work in such hot, wet countries. Some day, when the natives have learned how to govern themselves, and manage their industries and trade, the Americans will go home. We are educating them in our schools, letting them help more and more in the government, teaching them better methods of farming, road-making, bridge and railroad building, and developing the manufacture of hemp rope, cotton and pineapple fibre cloth, sugar, indigo and cocoanut oils and soap.

Not a Country for the White Man

We will leave them with a beauti-

ful and healthy, fortified capital on Manila Bay, several smaller seaports with improved harbors, good schools, an organized government with ample revenue and no debts, hundreds of miles of railroads and thousands of miles of telegraph line, ocean cables to China, Japan and the Hawaiian Islands, developed industries, and a large trade with the United States, England, France and China. Larger crops of every kind could be grown. Cattle could be grazed on mountain pastures. There are unknown quantities of coal, petroleum, copper, gold and silver, lead, marble and pottery clays in the earth; and gums, dyes, spices, cabinet woods and ship-building timber in mountain forests that are almost untouched.

A Glimpse of the Tropical Philippine Jungle

This native Filipino is cutting up a log in the depths of the forest.

You may think that the "Filipinos" ought to become enormously rich. But think a minute. White people cannot work at all in that steaming heat, and brown ones must take life easy. Countries are much like people. It is not the tropical lands crammed with natural wealth that grow rich, as a rule, although Hawaii is an exception, but the poor, cold, sterile countries like New England, where people can work hard, and where they are obliged to use all their wit and skill in order to make enough to live on.

A Tree-House in the Philippines

In some parts of the Philippines the natives are still savages. Some of them build tree-houses like this one as a protection against enemies.

So, back of the seaports in the Philippines, except for the Spanish churches and American schools and improvements, the Filipinos live and will continue to live much as they did four hundred years ago.

The Little Red People at Their Work

Here are several kinds of coral polyps as they really look in the depths of the ocean. The little animals are all sitting in the doorways of their coral homes on the lookout for food. Compare this with other pictures in the article showing the coral after the polyps have been removed.

Some Little Red People Who Live Under the Sea

Living Flowers on a Branch of Coral Rock

"Each little animal is a short tube, the upper end looking like a tiny sea anemone. The lower end is fastened to the coral rock."

SOME little girl you know is sure to have a string of coral beads. They may be a deep honeysuckle red or the palest, shell pink. Coral is a kind of shell. It is the skeleton house of tiny sea animals that live together in colonies. For a long time people thought the coral a sea flower, for it is rooted fast to a rock, and colored rays are set about its round mouth in a flat circle like petals. On the Florida coast people go out in glass bottomed boats and look down on beds of blossom-like corals.

Little Houses Around Your Neck

Each little animal is just a short tube, the upper end looking like a tiny sea anemone. The lower end is fastened to the coral rock by a lime ring that is made in the body as bones are made in our bodies. All over the branching, brain-shaped, star, sea-fan or sea-plume coral rock, the little animals are set at regular intervals. Food is taken from the water that flows through the mouths. This is carried from all the members of the colony to every other through a jelly-like membrane that connects them. The shell is formed under the animals and the membrane, making sometimes a smooth layer, sometimes a ring pitted one. Just think of sharing your backbone!

People Who are Part of Their House

Work of the Coral Builders

Australia's Coral Reef at Low Tide

A great barrier-reef of coral extends for 1,250 miles opposite the northeast coast of Australia. This is how the top of it looks. See how many different kinds of coral it is composed of.

The Coral-Eating Butterfly Fish

The Home of the Corals

Deep in the waves is a coral grove,
Where the purple mullet and gold fish rove,
Where the sea-flower spreads its leaves of blue,
That never are wet with the falling dew,
But in bright and changeful beauty shine,
Far down in the green and glassy brine,
The floor is of sand, like the mountain drift,
And the pearl-shells spangle the flinty snow;
From coral-rocks the sea-plants lift
Their boughs, where the tides and billows flow.

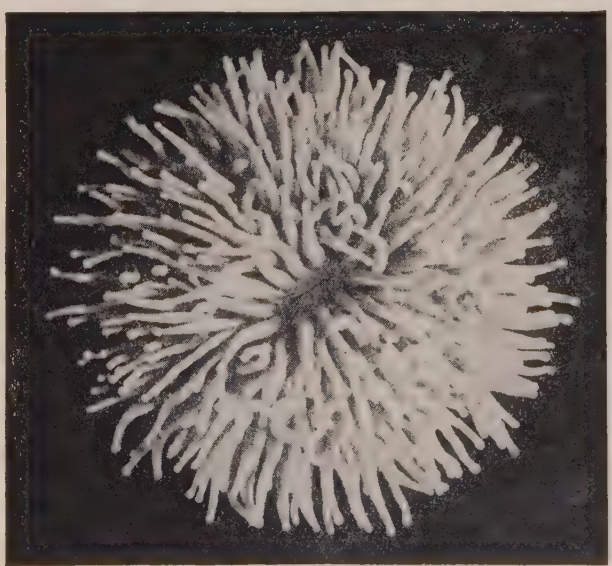
PERCIVAL

Flower-Like Corals

Here are geraniums and a chrysanthemum of pink lime-rock that grow under the sapphire-blue water of the warm Pacific. In the larger picture you see a part of the coral rock that supports the geranium-like coral flowers. A shell and another species of coral, this one star-shaped, are also shown.

How a Coral Grows

This picture gives you a fine view of the coral's rays or arms. You can understand from it why people for a long time thought the coral a sea flower. In the center you see its mouth. In one of the old myth stories of the Greeks there was a god who had a lot of arms—and he was always very busy with them—but he didn't have so many as these little corals have. When a coral begins growing, at first it looks like a little balloon. Then step by step it gradually s h o o t s up, until it l o o k s like the upper half of a peeled orange showing the different sections in which the orange is divided. Then on the top of the various sections begin to appear little lumps which gradually grow into arms like those you see here.



Coral Rock for Roads

The hard coral rock of the Bermudas is excellent for roads. The man is breaking the coral boulders into small pieces of uniform size which will be used for ballast for the roadbed.

Stag's Horn Corals

Each "horn" of this variety of coral is covered with the projecting mouths of the tubes or cells in which the coral polyps live. They make the surface as rough as a nutmeg-grater.

A Home of Coral

This house is a typical Bermudian home. Both house and wall are built of white-washed coral rock. Where would people on a coral island get their water—from springs and wells? No, unless the island is very old and the layer of soil above the coral deep enough for ground water to collect. The inhabitants of the island have to depend on the rain for their water supply. At the right of this house you see a round tank which catches the rain as it runs from the calcimined roof. This is the sole source of water supply for the family.

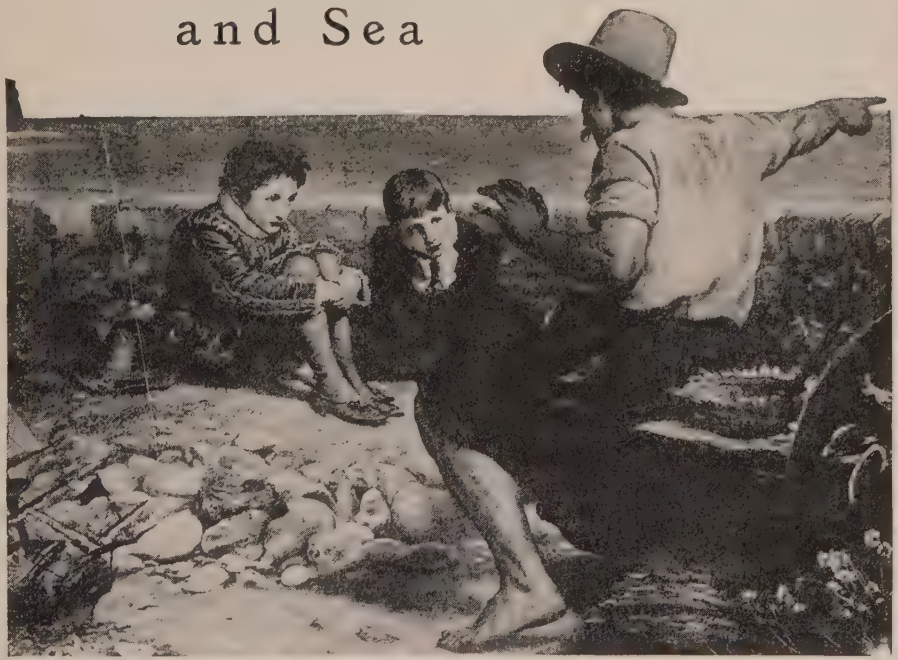
A Roadway Through the Coral Rock

The Bermuda Islands are an example of coral islands near our own country. Here a road has been cut through some cliffs of coral rock. The rock was formed by the waves. They wash soil, shells and broken off coral spikes upon the original coral structure on the ocean floor. Then this deposit turns into a limy rock. It is upon this that the soil forming the island is deposited.

Strange Sight Seen by Desert Travelers

Mirages are sometimes seen in the desert. Occasionally there is a double mirage like this—a shadow of a shadow! What a contrast between the burning desolation of the desert and this stretch of cool water, with the shaded palms beyond.

The Call of Land and Sea



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These two boys, as did our poet Longfellow in his youth, are listening to a sailor with "bearded lips," describing the wonders of far-off lands and of travel by land and sea. One of the boys (who afterwards became Sir Walter Raleigh) has made up his mind that some day he is going to see the things the sailor is describing. The other boy is merely entertained by the stories. Which of the boys would you say is Sir Walter?

PAST every doorway runs a little road. It may be only a path or trail, but it leads to the end of the earth. It is such a wizard of a coaxing little road. From the first hill top it discovers a new world. It hints to the country boy that fame and fortune and pleasure are to be found in the city. To the town boy it talks of freedom and adventure on the sea. In every land the broad highway calls to youth, and everyone who sets his feet upon it feels himself the first wanderer.

The Mirage

You know how a coin appears in a glass of water at the place where it isn't? This is because the rays of light from the coin, passing out of a denser medium—the water—into the air are bent. Mirages are caused in much the same way. In the case of desert mirages the rays pass from the hotter and less dense air near the surface to the cooler air above. In the desert scene on the opposite page the rays from the mirage are themselves reflected in still another stratum of air of different density.

A Procession Centuries Long

He is only one of an age-long procession. Men have always been going up

Home From the Hunt

"The elephant has carried kings on his back, and lifted ship timbers with his trunk. He has borne hunters through tiger-infested jungles."

and down and to and fro in this world. Wouldn't it be interesting to learn the many ways in which they have traveled? A hundred years ago there wasn't a railroad on earth. Long before horses were trained for anyone to ride, wishes and two feet carried tribes and nations across continents. And afterwards, too. There never were enough animals in use so that all men could ride.

Think of the armies that have marched! And the companies of pilgrims that are still going along dusty highways to holy cities! Barefooted friars have preached at every wayside. Countless students have taken their wander year. They walked and begged their way gaily all over Europe, just to see other lands and peoples. In the Middle Ages wandering poets and musicians sang and played in every castle courtyard. American Indians had tamed only dogs before white men came. Canoes carried them over water, but they walked through the forests.

The Long Procession on Foot

Strange Tales by Old Travelers

Everywhere footsore men used animals as beasts of burden, long before history began. The earliest rock carvings in Egypt and Greece show horses and cattle being led and driven. In the myths and folktales of every ancient people are wonder stories of wild beasts. Some of the Greek gods were half animal. The Centaur was the man-horse; Pan the goat-footed piper. The sun, the chariot of Apollo, was drawn by fiery horses; Diana was the huntress goddess. A god turned into a white bull and carried Eu-

The Horse and the Greek Myths

ropa away on his back.

You see, all animals were once wild, and man had to tame them before he could use them.

How Animals Were Trained

Do you remember how Robinson Crusoe got so he could run so fast that he captured goats on the rocks? No doubt wild animals were caught by swift runners. Others were trapped. Even today herds of elephants are surrounded and driven into pens. Baby animals are taken and brought up in captivity. And, in times of famine, animals have come to men to be fed. Here is a story about that:

The Winter of the Deep Snow

Did you ever hear of our winter of the deep snow? It happened in 1831. Lincoln could have told you all about it. All over the Mississippi Valley snow lay from four to ten feet deep for weeks. Babies born that winter were called "snowbirds" at old settlers' meetings fifty years later. Wild deer, unable to find food in the woods, came to farm yards. Farmers let them paw the snow from corn shocks buried in the field, and feed. Some fenced herds in and started private deer parks. Half a century later the writer saw one of these deer parks. The pretty fawn-colored does and spotted fawns were so tame they would eat clover from your hand, and stand to be petted.

Handsome Mr. Camel

"My, my, ain't he plain!" This was what a dear old lady said the first time she saw a camel. You could hardly call him handsome, perhaps, but he really is, in spite of that queer face and his unpleasant disposition. He is stupid; he cares for nobody, and he may bite you if annoyed, but you remember "handsome is as handsome does." He works hard all day and for ages he and his ancestors have served the world in carrying freight and people across the great desert places.

The Grass-Eaters Who Work for Us

Deer are grass eaters. Except dogs, all the animals that work for men are grass-eaters. A buck deer, a bull elephant, or buffalo will fight if he has to, and he is ill-tempered when tamed, but he hunts neither men nor trouble. No grazing animal is as fierce as a flesh eater. He is timid, but if well treated loses his fear, and is easily managed. But the grazers differ very widely in size, strength, intelligence and usefulness.

The Little Camel of the Andes and Other Travelers

The camel is stupid, and he cares for nobody. Still, without the camel, the seas of desert sand could never have been crossed. And but for the llama, the tiny camel of the Andes that can carry a load of only fifty pounds, the gold could never have been brought down from the mountain mines of Peru.

Camels, Elephants, Oxen and Buffaloes

The elephant has carried kings on his back, and lifted ship timbers with his trunk. He has borne hunters safely through tiger-infested jungles. In every country around the Mediterranean Sea, the donkey has braced his patient little back to bear the weight of his peasant master, and to pull the cart of the farmer and huckster. The ox has always been the advance guard in new lands. Dull and plodding, but

The Ship of the Desert

Slow, stupid, and awkward, the camel is not a lovable animal. But without him the dusky Arabs would never have been able to cross the vast stretches of desert waste in Arabia and Africa.

strong, he has drawn the heaviest caravans, and dragged the plows through stiff sod. It is the ox that has bent his shoulders to the yoke and helped men conquer homes in the wilderness. The humped water-buffalo is the ox of the Far East.

The "Horses" Santa Drives

In the Far North, men could live on the frozen wastes, but they could not travel without the dog and reindeer. Reindeer cannot pull heavy loads, but they can go like the wind—a hundred miles a day. So fast do they travel over the snow, under the frosty stars of the arctic twilight, that they are the steeds chosen by legend for the Christmas eve journey of St. Nicholas. Such a load of toys! But then, you know, St. Nick had "eight tiny reindeer" to pull that load. To the Laplander the reindeer is horse, cow and sheep, for it gives good milk, and a fleece of wool every spring.

Dogs that Work Like Horses

Wild "Horses" of the Eskimos

The "huskies" of Alaska and of Greenland are quite different, but they are both wolf dogs and still half wild. All dogs were once wolves and foxes and jackals. Those animals are flesh-eating hunters. It must have taken a long, long time to train dogs to guard and defend flocks of sheep, instead of chasing them. The Newfoundland dogs pull heavy loads of wood and food in Labrador, and milk and vegetable carts

Camel Freight Train in China

©Underwood & Underwood

Although China is rapidly mending her ways and changing her customs and government to modern patterns, much of her commerce is still carried on in the old way—by camel pack-train. Here we see one of these camel trains entering China. It has just left the Great Wall behind and is proceeding toward the interior. The Great Wall was begun in the third century B. C. and is 1,500 miles long. It was built as a defense against invading tribes from the north and is 25 feet thick at the base and 12 feet wide at the summit.

The Desert Ship and the Seas of Sand

Camels, as you know, are called the "ships" of the desert; and as if trying to play that they actually are ships, they heave along, like a ship on a choppy sea. To ride one makes you actually seasick until you get used to it.

Notice that the camel lifts both feet on the same side together as a horse does when pacing, and not the right front foot and the left hind foot, for example, as a horse does when he walks or trots. You can see this motion better in the first and third of the four camels in the desert here. To ride a pacing horse is very comfortable, but the camel has a writhing, hitching, up-and-down motion as if you were going three or four different directions at once, but principally off,—if you don't cling tight.

When you ride a camel at the zoo or in Egypt, where camel riding for travellers is provided for, you have a saddle to sit on. The camels in the picture have saddles because these men are chiefs of desert tribes, but in an ordinary caravan, you would have to sit on a pack. If you were traveling by camel, as these stately Arabs are doing in the picture, you, too, would probably start the day's journey on foot because this is the coolest part of the day and you would get quite enough camel riding before night.

And doesn't Mr. Camel make you smile, just to look at him? He seems to have everything on crooked. Yet, as a matter of fact, his backbone is as straight as anybody's. What gives him that crooked look is the hump. You notice the camels in our picture have only one hump. One-humped camels are the ones most used for riding. The freight camels have two humps and come originally from the cold plains of Central Asia and Northern China.

Nothing ever seems to matter much to a camel. These two-humped camels, for instance, get along and work just as well in the heat of the desert as they do on their cold, native plains, where they sleep outdoors in the snow, with icy winds blowing a perfect gale. On the other hand, where it is hot, they seem actually to enjoy the heat; for when these Arabs in the picture stop for rest, unload the camels and pitch their tents in the shadows of the sand waves, what do you suppose Mr. Camel does? He doubles his queer front legs under him, squats down right in the burning sun and begins to chew his cud, swinging his jaw from side to side, as much as to say:

"Well, this is something like!"

A Social Call in Eskimo Land

Here are two little Eskimo boys who have evidently just met. Perhaps one came to call on the other. They are no doubt saying "how do you do" in the Eskimo language, for they are "shaking hands" in Eskimo fashion; that is to say, by rubbing noses. One of the dogs is looking at them as if interested in the proceedings. Probably he is, for the fact that the boys have stopped has given him and his fellow "huskies" an opportunity to rest. The Eskimo dog, as our story of land travel tells us, is, like the camel, more famous for his ability as a worker than for his social qualities. Unlike most dogs, he doesn't seem to enjoy being petted, and among themselves the dogs are always "having words"; that is to say, they quarrel and snap at each other a good deal. But what faithful workers they are! Imagine them in long teams, taking Peary to the North Pole, and Amundsen to the South Pole.

in Belgium. Sometime you must read "The Dog of Flanders," the story of a working dog and his little master. The feet of the Newfoundland dog are partly webbed. He is a fine swimmer. He is often kept on bathing beaches to save people from drowning. The St. Bernard dogs find men lost in the snow on the Alps. Many kinds of dogs will guard children and houses. But the Eskimo dog is the hard laborer. The children cannot pet him. He is still so wild that he sometimes escapes and makes a den.

How Fast the "Husky" Goes!

How he can go! A team of six "huskies" can pull a man and his pack on a sledge, fifty miles a day. Dogs took Peary to the North Pole and Amundsen to the South Pole. They leaped crevices, scrambled out of gullies, scaled cliffs of sliding snow, swam icy waters and carried men to the top of the world. If ever a monument is raised to the arctic explorer, the "husky" should be at his feet—wolf ears up, stout legs braced, strong shoulders straining at the harness.

Use of Horses for Traveling

The Knight and His Horse

The dog and the horse have always been the closest four-footed friends of men. The horse is the proud knight among animals. Do you know the picture of Sir Galahad—the young knight in armor standing beside his horse? Don't they seem to belong to each other? A knight without a horse would be like that smile without a cat in "Alice." Why, the French name for knight is "chevalier"—horseman.

Horses of Different Countries

Beside the striped horse of Africa that you see in menageries, and the donkeys, there were three varieties of wild horses. All over Europe at one time, there were big black

An Indian Baby Carriage

Indian papooses rode in baby carriages like this—quite without springs—on the long marches to better hunting grounds or safer quarters. Part of the household's supply of skins and blankets was strapped to the back of a scrawny Indian pony. Over this was fastened a strong cage of supple willow branches, and the children rode comfortably within, while their mother plodded along beside them leading the horse.

and dark bay horses, running wild in the forests. A swift and slender racer lived on the plains of western Asia. And in several cold and mountainous countries there were shaggy little horses that we call ponies. The Japanese have a native pony. The Mexican broncho is a spirited little beast that can be broken to the saddle only by the best cowboy riders. But oh, the Shetland ponies of the Scottish highlands! They are as dear and rough coated and gentle as big dogs. Children can feed and pet them and drive them to carts.

The Horse in History

In ancient times, horses carried only kings, chiefs, nobles and military leaders. The Arabian steed lived under the tent with his master. Every one petted him and fed him sugar dates. The sun caught his satin coat when he skimmed over the desert like a bird. It was the

The Mountaineer's Freight Car

On the steep mountain trails where a wagon cannot go nor a railroad be built, the patient little burro does his share of the world's work. Sturdy, sure-footed, and strong, he has carried millions of pounds of merchandise to the people far away from cities and civilization. In the picture the man is roping three heavy boxes to the burro's back.

big horse of Europe that was driven in the chariot-race. Ask your papa to read to you the account of the chariot-race in "Ben Hur" tomorrow night. The Romans used big horses in their terrible cavalry charges. And the knights used them in the jousts and tournaments and when they went adventuring. You should know the stories of King Arthur and his knights. All the knights wore armor and carried heavy spears and lances. Only a big horse could carry so much weight. How his great hoofs thunder down the ages of romance!

The horse is affectionate and proud. When armor was no longer used, Arabian horses were brought to Europe for kings and the gentlemen and ladies of the courts to ride. Farmers got the big horses. Before that they had had only oxen and donkeys.

When Men First Rode on Wheels

In the Days of the Chariot

No one knows when wheeled vehicles were first used. Chariots, and splendid ones, are spoken of in the Bible. Like horses they were used in warfare, and for racing and for display. Roman chariots were splendid and costly, but they could not have been very comfortable. The driver stood and drove four

horses abreast. The back was open, like a wheel-barrow, the wheels solid, and there were no springs. In the days of knighthood the clumsy chariot was not used at all. A noble rode a horse, often with his lady on a pillion behind him. His servant rode a donkey. But the light and spirited Arabian horse could not carry double.

The First Coaches

About the time of Columbus, great ladies made long journeys in coaches. These coaches were fine, but they had no springs and the roads, except those the Romans had built, were very bad. And in the walled cities the streets were so narrow that they were all sidewalk. A carriage on one of these streets would send everyone scuttling into doorways.

The Hitching Post at the White House

Long after streets were widened, and coach bodies were swung free of the wheels on leather straps, it was thought to be more dignified to ride horseback. Only a little over a hundred years ago Thomas Jefferson galloped from his home at Monticello, to the White House. And there he found a long row of hitching posts for the use of visitors to the president.

Where Ladies Were Carried in Boxes

In the Old World ladies went to court and to parties in sedan chairs. These were elegant painted and gilded and silk curtained vanity boxes on poles. They were carried by men-servants or hired chairmen. The ladies inside, in their powdered hair, rouge and patches, brocade and lace and jewels and high heeled slippers, were as pretty as dolls. Sedan chairs are used by high-born ladies and children in the narrow streets of Chinese cities today. In Japan, men pull the two-wheeled jinrikisha.

The First Stage Coaches

Why the Chairmen Complained

It isn't pleasant to us to think that men were ever used for horses. And you would think the sedan chair-bearers would have been glad when the horse cab began to be used. No indeed! The chairmen of London complained bitterly about losing their occupation. But once they were introduced, the hackney coach and hansom cab multiplied as fast as the automobile multiplies today. By and by, when London became so big that few people could live near their work, there were penny omnibuses; and stage coaches made regular journeys to distant cities.

You know that when the automobile was invented, many new factories had to be built. Special gasoline engines had to be made, and rubber tires and lamps, and many parts that had never been used in any machine before. This is true of the air-ship and of any new thing. Private coaches and stage coaches, cabs and omnibuses came into use so fast that thousands of people were employed in making them. To make them took workers in wood, iron, steel, brass, leather, cloth and glass making, besides upholsterers, painters and decorators. Good roads had to be made, too, and posting inns built to care for travelers and to rest horses.

Our First Stage Coach Lines

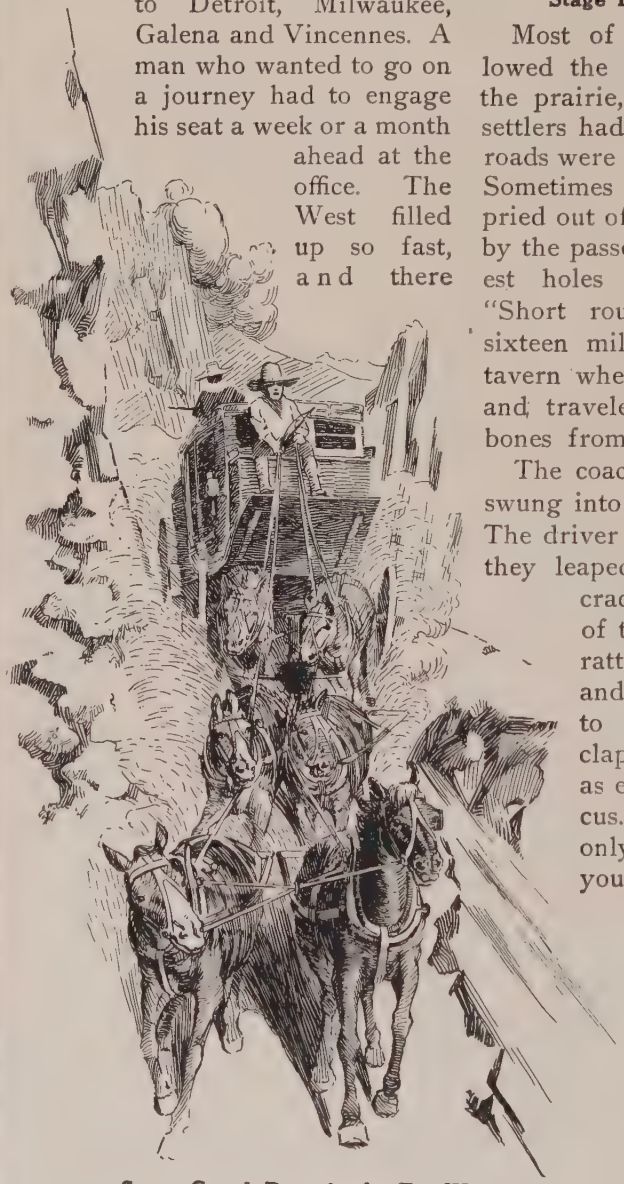
Engaging Seats a Month Ahead

In America there were stage coach lines between the cities. They ran between Boston and New York, Philadelphia, Baltimore and Washington. Later stages ran out from Cincinnati, Louisville and St.

Uncle Sam's Mountain Roads in the Philippines

Mountain climbing isn't so difficult when one has such pleasant roads to travel as that shown in this illustration. If you ever visit the Philippines, you will have an opportunity to enjoy the beautiful scenery while traveling through the mountains on roads like this. These roads are among the many improvements that have been introduced by Uncle Sam since he came into possession of these islands. This is a part of what is known as The Benguet Road. For more than a score of miles it runs through scenes of beauty, which are not surpassed by any mountain scenery in the world.

Louis, along the main traveled roads. By eighteen thirty six Chicago had stage-coach lines running to Detroit, Milwaukee, Galena and Vincennes. A man who wanted to go on a journey had to engage his seat a week or a month ahead at the office. The West filled up so fast, and there was so much traveling that people could not wait for good roads.



Stage Coach Days in the Far West

Stage Lines and Indian Trails

Most of the early coaches followed the old Indian trails across the prairie, where caravans of the settlers had cut wheel tracks. These roads were hub deep in dust or mud. Sometimes a stage coach had to be pried out of a rut, with a fence rail, by the passengers. Beside the deepest holes jokers put up signs: "Short route to China." Every sixteen miles there was a posting tavern where horses were changed, and travelers ate and rested their bones from the jolting.

The coach from the west always swung into Chicago in grand style. The driver clicked to his horses and they leaped to a gallop. With a crack of the whip and a toot of the horn, the stage coach rattled over the log bridge and dashed up Lake Street to drop passengers at the clapboarded hotels. It was as exciting as a fire or a circus. And, by the way, it is only in the circus parade that you can see such gorgeous chariots and coaches as people once rode in. On Coronation Day a new king and queen of Great Britain go to be crowned in a royal, red and gold coach, that makes one believe in Cinderella and fairy godmothers.

Before there were railroads, the mails and passengers were carried in stage coaches. They were lumbering and uncomfortable, but they got over the ground in a hurry, for they were drawn by four or more horses and driven at a gallop where the roads would permit. In the lawless days of adventure and romance in the West, a man rode on the back of the coach behind the driver, as you see here. He kept his eyes open and his gun loaded for the band of highwaymen who might be hiding beyond the next turn in the road.

The Good that Good Roads Do

Would you believe that these are both pictures of the same piece of Massachusetts road? One was taken before the road was made a state highway and shows a series of muddy ruts which, under modern methods of road construction, became a hard, level driveway, as smooth as a city pavement.

Here Comes the Train!

© Keystone View

What a thrill to watch the giant engine and long train of cars rush by! The little dark eyed girl looks as though she might have waved at the engineer—I'll wager he waved back, too!

The First Railroads

THERE was much excitement when the first trains ran on railroads with steam power. The first train that ran from Liverpool to Manchester, in 1830, tore across a marsh and roared through a tunnel at twenty-nine miles an hour! *Some reckless passengers waved hats and flags, but most of them clung for dear life to the benches in the open cars. They felt much as you did when you took your first airplane ride.*

Terrific Speed in Early Days

It was 1848 before Chicago had a railroad. Several short lines had been built in the East, but when men tried to raise money to lay ten miles of track out of Chicago, bankers thought it *madness* to talk of building a railroad west of Lake Michigan. But it was done. When a dozen men made the first flying trip behind the old "pioneer" engine, the swamp shook like jelly under the pounding wheels. But a load of wheat was brought back to ship east over the lakes, and that railroad earned $2,000 the first month. Within a few years the road was extended to Galena. Before the war the

The First New York Central "Flyer"

Don't you think it would be great fun to ride in a train like that? Such a funny locomotive and tender and "passenger cars"! And as for the cab, where that wonderful man, the driver of the iron horse sits and controls its speed with a little motion of the throttle, there isn't any, you see. What did the engineer do when it rained? He simply stood and took it, while the passengers on the roofs of the carriages—like the Captain of the Pinafore—generally "went below". We can also understand, as we look at this quaint old story picture of the early days of locomotive engineering, why passenger cars are still called "carriages" in England. You see the cleverest of men couldn't think out a modern locomotive and passenger cars all at once. They first built light engines with spindle wheels, then they hooked on a kind of dray for a tender, and attached coaches that were practically duplicates of those drawn by horses. The main difference was in the addition of wheels that would run on a rail.

Just Look at the Difference

The "DeWitt Clinton," with its remodeled stage coaches, was placed in service on August 9, 1831, between Albany and Schenectady, over what is now a part of the New York Central Railroad. The whole train then had but a fraction of the weight of a modern locomotive. As a matter of fact, the "DeWitt Clinton" engine and tender weighed but 12,000 pounds, a trifle less than the weight of one pair of the wheels on the modern locomotive with which it is compared.

A Modern Train Ferry

Here you see a modern passenger train backing onto a ferry—a long, blunt-nosed vessel, very strongly built for the purpose. When the water is rough the wheels are blocked and clamped to the rails of the track on the boat, to prevent their turning and slipping off.

The Terminal of a Great Railroad

The Jersey City Terminal of this railroad is a busy place. Long lines of freight cars are being run into warehouses, and those loaded with grain will be emptied at the grain elevator in the center. From here much of the freight will be loaded on ships and go on a longer journey across the water.

How the "Flyer" Takes a Drink

The Twentieth Century Limited, running between Chicago and New York, has not a second to spare as it whisks hurried business men from one great city to another. Instead of stopping at a water tank for the drink without which it could not run, it scoops up a few gulps on the run from these troughs of water between the rails and beside the track. It is such devices as this that make the flyer's marvelous schedule possible.

last stage coach went out of business. Many of them were taken west to run to mountain mining camps.

How fast the world has moved since your grandfather was a boy! All you have to do now, to go anywhere, is to buy a ticket and board a train. And you can get into an automobile at your door, and go whizzing all over the country, on smooth roads and cushioned wheels. The electric trolley is everybody's omnibus. The time may come when we will go up to our roofs to get into little private run-about flying machines. Who knows?

If Sir Galahad Had an Auto

There is one thing that is very nice about all this traveling and carrying goods by machinery, with steam, gasoline and electric power. Animals have much less work to do. Fewer horses are to be seen in the city, and even on farms. Horses will be better bred and better cared for. They will be used for riding and driving by people who love animals. Do you think Sir Galahad would trade his horse for any machine? You can go fast and far in an automobile, but you can't call it pet names and feed it lumps of sugar.

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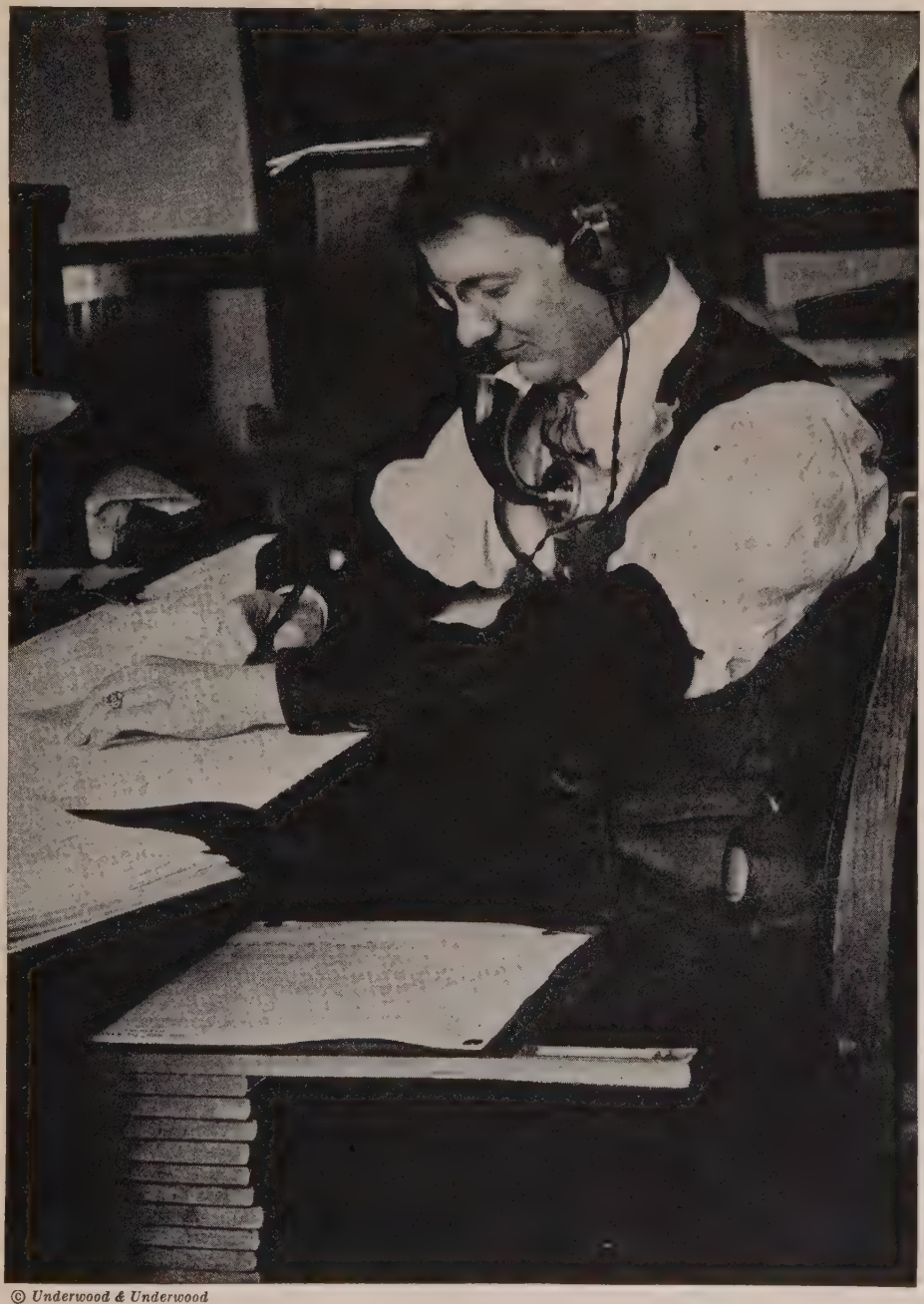
An interesting view of the Pennsylvania Station in New York, the second largest railroad terminal in the world.

The Train Dispatcher



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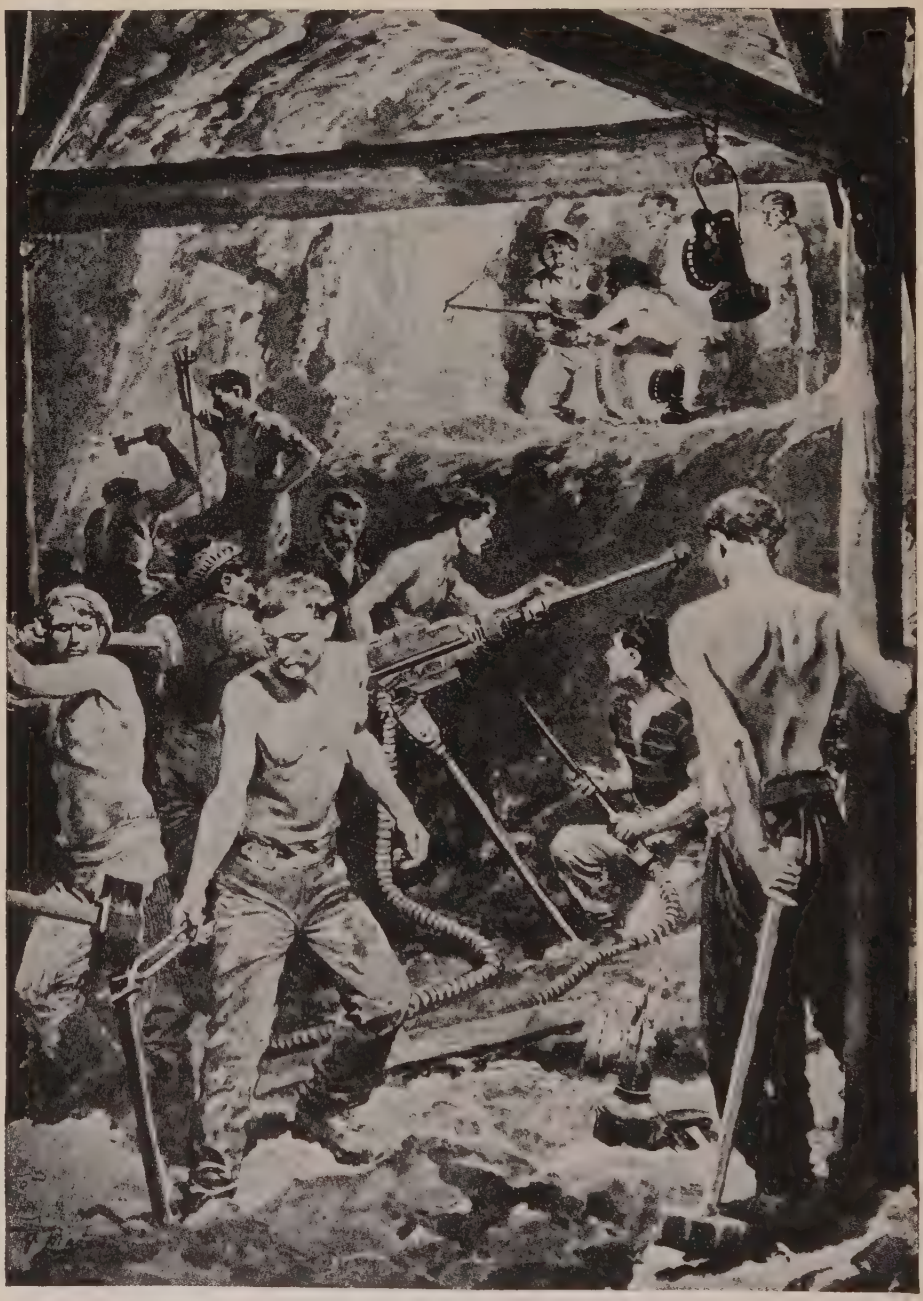
Clear of head and steady of nerve, the train dispatcher must shoulder a tremendous responsibility. On the charts before him is shown the position of every train on his line, and the telephone and telegraph are ready for his use. If he makes a mistake and sends a wrong order or message, many people may pay for it with their lives.

On a Spider's Web of Steel

This is the great bridge over the Pembina River, in North Dakota, constructed by the Grand Trunk Pacific Railroad. It is 900 feet long and 213 feet above the river. With no visible masonry support, doesn't it seem almost too light, too fragile to bear the weight of the long freight train passing over it? But remember, every bit of its frame work is of steel.

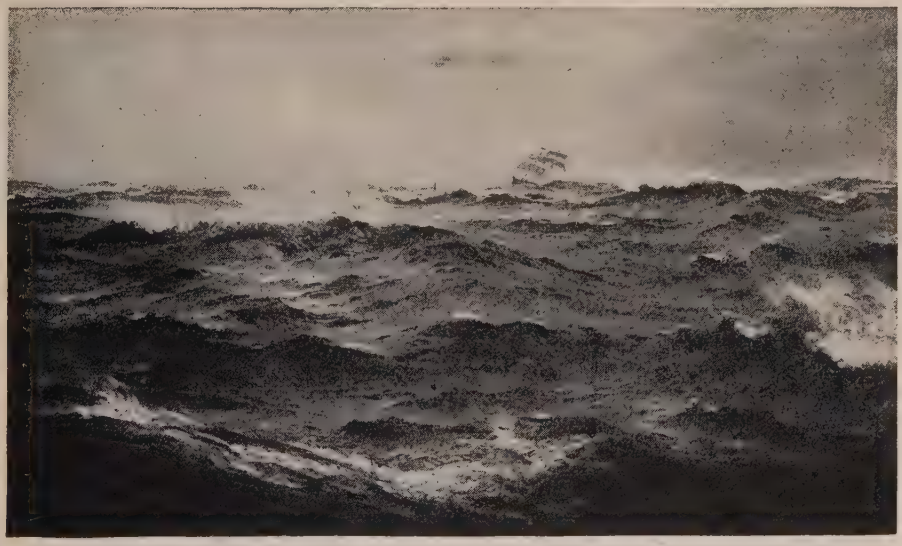
Kicking Horse Pass, in Alberta, Canada, is one of the main gateways through the great wall of the Northern Rockies. It is here that the Canadian Pacific has recently built a tunnel—you can see the entrance in the picture—which avoids some of the road's worst grades and cuts off many miles of the long transcontinental haul.

How They Make Holes Through Mountains



In boring a tunnel through the solid rock foundations of the mountains, the men work in four gangs. One gang works a little ahead of the second one, and at a higher level. Two other gangs are working from the other end of the tunnel to meet the two gangs shown in the picture. Notice the compressed air drills and how they are used.

How Men Learned to Ride on the Water



Although as a rule the Mediterranean is not "wild and stormy, but warm and blue," just as it was in the days of those happy children of the green islands in the sea—the Greeks—it sometimes gets quite rough, as you see here. The wind is probably coming from the northeast, the home of old Boreas of the Bitter Winds, as the Greeks used to believe.

By assuming that the directions in this picture are the same as those on the map, you can easily imagine that you are facing this North-easter. Notice how the sail bellies before the wind, and you can easily make out the prow and the jib boom which, as all boys know, extends from the prow of the vessel.

ONE of the most wonderful things Hiawatha did was to make the first Indian canoe. He stripped the bark from a yellow birch tree. This he stretched over a frame-work of cedar boughs. The edges he bound with the tough root fibres of the larch. He made the seams tight with resin. With colored quills he decorated the sides with pretty designs. His canoe floated on the river "like a yellow leaf in autumn."

Hiawatha was the great teacher and inventor of the Indians. His deeds and sayings were sung by the story tellers. The canoe was, really, a great invention. Before it was made the red men used logs to support them in swimming across rivers. No doubt they learned to do that by watching the beaver. Their first boats were hollow tree trunks. They made dug-out log boats, and rafts of drift-wood. But they could not go up and down rivers until they had canoes. In their fleets of "yellow leaves" they went over

The First Boats Man Ever Made

What Big Sea-Water Is This?

You like to study pictures in school, don't you? Well, then, let's make this picture talk, and tell us where we are. To what country do these men who are pushing off the boat, seem to belong? Africans, aren't they; in native dress? Then when I tell you that this picture was made by a Frenchman, what big sea-water would you take this to be? Where are the French possessions in Africa? Look at your map. That's right; this is that same beautiful blue sea, the Mediterranean, on which we just saw the little two-masted schooner driving before the rising storm.

the Great Lakes—"the big sea-water."

His Arms Were Man's First Paddles

The white men who came to America in their stout timber sailing vessels thought these canoes very crude and curious. But, so long before that they had forgotten all about it, the white men themselves had used hollow logs, rafts and canoes that they paddled over inland waters with their arms. A boat was the subject of a wonder tale to every ancient people who made and used it. If the Indians thought Hiawatha was helped by the Great Spirit, so the Greeks believed it was the god Hercules who made the first boat of a lion's skin.

The "Big Sea-Water" of the Ancients

This was in the Mediterranean Sea, the big sea-water of all the great nations of the ancient world. It was like a big, blue bath-tub with a rim of land around it. It was the center of a world that was believed to be small and flat. The Strait of Gibraltar was the water gate to an ocean-river that girdled the earth in darkness, flood and terror. You can find a map of this ancient world, or make one. On the south, in Africa, were Egypt and Carthage. On the east, in Asia, were Phoenicia, Palestine and Persia. Greece and Rome were in Europe, on the north. Very little was known about the western end of the Mediterranean. There was a wonder story that Hercules had ventured through the water-gate. The rocks on either side were called the Pillars of Hercules.

The Great Nations of the Inland Sea

All of these nations were rich and powerful. They had strong governments and armies. They built great cities and temples. They grew crops and manufactured many things. They made the most beautiful statues and paintings, and composed poems. They had some of the best thinkers the world has ever known.

The Boat That Acts Like a Broncho

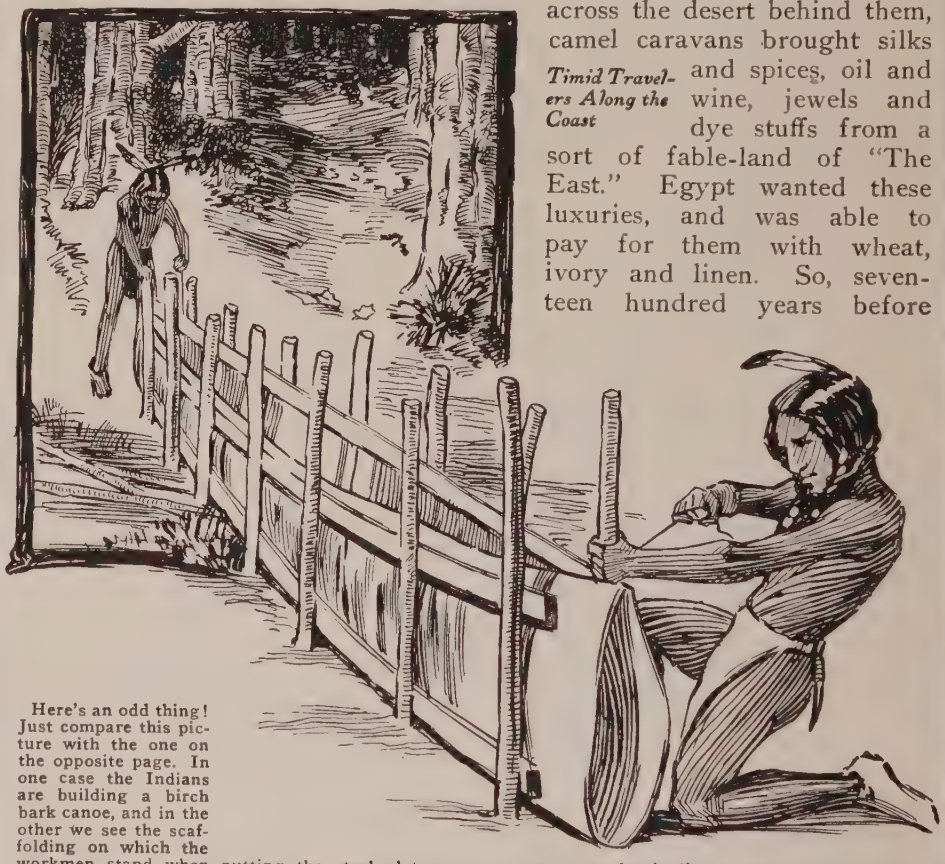
© *Underwood & Underwood*

You remember the fable about the frog that blew himself up by trying to be as big as an ox, don't you? Of course, that's only one of Mr. Aesop's funny stories, but here the ox himself is being blown up so that he can serve as a boat. This, evidently is some oriental country from the dress of the natives. And it must be very hot there because you see palm trees growing on the shore. This is India, and the natives use these queer boats for crossing even the swiftest rivers, like the Sutlez, which you see here near its starting point in the hills.

They lived on this great inland sea. It was not wild and stormy, but warm and blue, dotted with green islands and bordered by low coasts. There were only a few dangerous places. But most of the people who lived on the borders of this sea were afraid to venture on the water. The Egyptians made boats that they used on the Nile River. None of the other people had a big river.

The first travelers on the Mediterranean were obliged to push out to sea to make a living. The Phoenicians had only a narrow strip of poor land on the coast. They could not grow crops. But they had a whole mountain side of cedar trees with which to build boats. And across the desert behind them, camel caravans brought silks and spices, oil and wine, jewels and dye stuffs from a sort of fable-land of "The East." Egypt wanted these luxuries, and was able to pay for them with wheat, ivory and linen. So, seventeen hundred years before Christ was born, Phoenician merchants timidly launched small row boats, and crept along shore to the mouth of the Nile. The first boats could not have been much better than the redman's canoe.

Timid Travelers Along the Coast



Here's an odd thing! Just compare this picture with the one on the opposite page. In one case the Indians are building a birch bark canoe, and in the other we see the scaffolding on which the workmen stand when putting the steel plates on a great transatlantic liner. The Indian builds his scaffolding to hold the birch bark in place, while the scaffolding of the liner is to help the workmen put the plates in place. And in building a large birch bark canoe, such as the Indians used to carry provisions and goods in their traffic with the white men, it was necessary to use a number of pieces of birch bark in covering the frame, just as it takes many steel plates to cover the hull of a big ship today.

In making a birch bark canoe, the bark was stretched over the light wooden frame and sewed together with strips of deer skin, then the joints were covered with spruce gum to keep out the water.

For more than a thousand years

A Great "Canoe" of Steel

Building a great modern ship is something like building a birch bark canoe. First they set up the frame and then they add the outside. In the case of the ship the outside is made of steel plates. Of course, the plates themselves would sink, but the ship, as a whole, is a great deal like a sheet iron pan in the kitchen, that will easily float provided it doesn't get "water-logged." Before a big ship is loaded with freight and with passengers it stands high out of the water. As it takes on its load, it sinks deeper and deeper. It is so built that it has capacity for a given amount of freight as well as passengers and it is not loaded beyond this capacity. On ships you will notice a water line painted around the hull. Vessels are not allowed to be loaded so that this line sinks below the surface of the water.

The "Whirlwind" Boats of the Orient

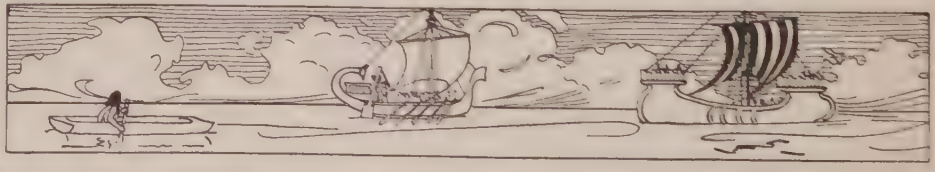
© Underwood & Underwood

Here is another queer kind of boat they have in the Orient. You can see that the people in this boat are people of the Orient, from their dress. If the bull hide boats remind us of bronchos, we may say that these circular boats—when we try to manage them ourselves—make us feel as if we had been caught in a tornado. In rapid water they go round and round and take you everywhere except where you want to go. The natives, however, manage them as easily as an Indian manages his canoe.

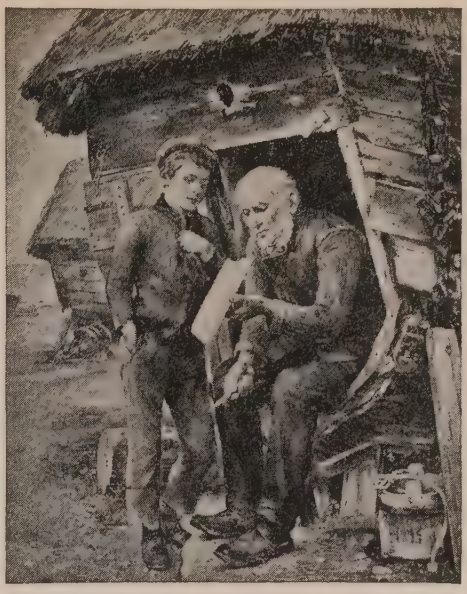
How the Ships Began to Grow

the Phoenicians did most of the carrying trade on the Mediterranean. They built the rich cities of Sidon and Tyre, and founded a richer colony at Carthage, west of Egypt. All the time they built bigger and better boats. They had fleets of round-bottomed, roomy cargo boats, and sharp-nosed war vessels to protect them. Greece and Rome copied their ships and tried to capture their trade, but the Phoenicians were the better shipbuilders and sailors. They no longer feared the sea. They multiplied their oars, used two oars for a rudder, at the stern. They set up a tall mast and spread a big, square, purple sail. From behind a wall of wicker work and bull's hide, above the deck, soldiers hurled darts on the enemy. A brazen prow, with iron beam, reared a fierce figurehead in the air. This was not for ornament. It was used to ram a rival ship.

The Phoenicians, Greeks and Romans rode the sea in galleys. In it the traders of Sidon and Tyre went through Gibraltar and along the coast to the North Sea and the Baltic. Southward they voyaged through the Red Sea. It is thought they may have rounded the Cape of Good Hope and re-



The Young Ship Builders



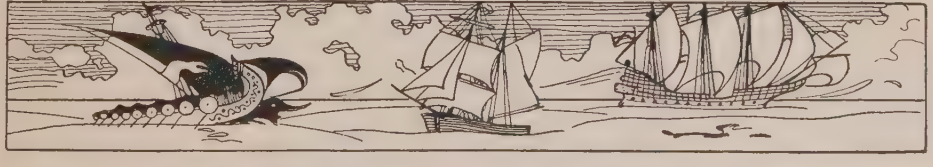
Here is a beautiful little boat that has been made with a jack knife. The boy wants to have it as graceful and perfect as a real ship, and he has brought it to the old sailor here who is squinting along the keel with a critical eye (and, no doubt, recalling the days when he made boats of the same kind).

turned by Gibraltar. Later the Carthaginians visited the west coast of Africa and planted a colony at Cadiz. These bold mariners had neither chart nor compass. They did not know the size or shape of the earth. They steered by the sun, and by the big and little bear groups of stars. They knew more about the stars than any other nations. If their cities had not been destroyed by armies, they might have crossed the Atlantic two thousand years before Columbus. The Norsemen went to Iceland, Greenland and perhaps to America, in boats very much like these, nearly five hundred years before Columbus, but no one knew anything about that until long afterward.

At the very time when the Phoenicians were doing such bold, brave things on the sea, the Greek Ulysses made his famous voyage to Sicily. And Jason led the Argonauts up into the Black Sea, in search of the golden fleece. What tales they had to tell! We know these stories because the Greeks had poets. It was only by the help of their gods, as they believed, that these heroes ever got home again. They had to still the waves, anchor whirling rocks and kill sea monsters.

A goddess led Ulysses to a forest and showed him the best trees for building his boat. A nymph handed him his axe, adz and auger. Like the American Indians, the Greeks made a wonder story out of the building of a boat. When his mighty bark was finished, the hero "heaved her down with levers to the sea."

After many centuries the Greeks and Romans made great ships with hundreds of oars in two, three and more banks, worked by slaves who were chained to the benches between decks. In "Ben Hur" and Roman history you may read the dreadful



life of the galley slave. But, after all, these galleys were just big oar and sail boats. They never went outside the Mediterranean Sea and they were used more for war than for trade. In three thousand years very little real improvement was made in vessels. A thousand years after Christ the cities of Venice and Genoa had fleets of galleys. They carried the crusaders to Palestine, and reopened the old trade routes of the Phoenicians.

The Galley in Ancient Warfare

The Sea God and His Son

This is a modern expression of the idea of the Greeks and Romans with regard to the nature of the sea. They thought it was ruled over by a god whom they called Neptune. He carried a three-pronged spear to catch fish and enforce orders and was usually accompanied by one of his sons, a Triton, who blew conch shells for trumpets and gave Neptune's orders to the waves to rise or be calm, as the case may be.

The Bolder Men From the North

The world was still thought to be flat, but it had grown larger. The Romans had gone across France, then crossed a narrow channel and found England. Later the Mediterranean countries had visits from pirates with blonde hair, blue eyes, tall bodies and roaring voices. They knew as much about shipbuilding as the Venetians, and they were much better and bolder mariners. They had their ship yards in rock and ice and fog-bound fjords of Norway, as Venice and Genoa had their great arsenals on the blue bays of Italy.

Longfellow tells, in "The Saga of King Olaf," how the Viking Ship was built. There were skilled timber workers, blacksmiths, pitch-boilers, sail weavers and rope makers. Boats two hundred feet long were launched. They had high, fierce figureheads, and iron prows for ramming. The Norse sea-rovers struck boldly out into a gray ocean of wild coasts, of fogs and ice and storm. Then were days and weeks when sun and stars did not shine to guide their way. They just plunged on through a welter of waves until they bumped into land. They settled in England and France. They burned towers and robbed on every coast. They crossed the Atlantic and they sailed around into the Mediterranean and attacked the trading vessels.

They did one good thing. They waked everybody up. No one wanted such troublesome neighbors, but the only way to be rid of them was to drive them off the sea. King Alfred copied their long ships. He made a great fleet of a hundred vessels and won England's first naval

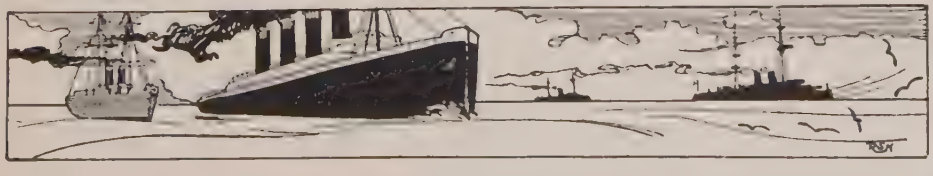
Learning Ship Building from the Pirates

battle. He was thinking about those fierce sea-rovers when he let the cakes burn. You know that story, don't you? The Dutch, the French, the Portuguese and the Spanish people all began to build ships. On every coast that was visited by the Vikings, people learned that men could go out into the Atlantic at least a little way—and live to tell the tale. And all these people discovered that they liked to go out on the water. They became good shipbuilders, sailors and bold explorers. The world grew bigger. Many people began to think it a globe, and that ships could go around it.

Then, one after another, several things

The "Shooting Star" and the Strange Light of the Sea

You've read "The Ancient Mariner", haven't you? Do you remember where this strange old man of the sea tells how, "the water, like a witch's oils, burned blue and green and white"? That was only a story, of course, but this picture tells something that really did happen. It shows an American ship, the "Shooting Star", sailing in the Indian Ocean and the waters all lighted up, from within themselves. Although, as it is night, as you can see by the stars, the moon isn't doing it. The light is made by little creatures of the sea who give it out in this way. The color is usually blue and green, but where the light is very intense, it looks white.



Atlantic Whalers Homeward Bound

This is a scene in the waters of the far North in the old days when so many ships used to sail into these regions to fish for whales. Although a whale is not a fish, but a warm-blooded animal, like ourselves, it prefers to live in cold water. It is covered with a thick layer of "blubber", a kind of fat just beneath the skin, that keeps it as warm as the thickest "comty" that you ever pulled over your nose in a cold winter night. In the old days, a vessel might bring home the product of as much as a hundred whales. Vessels for fishing were built to resist as much as possible the crushing effect of the ice.

happened. When Christoforo Colombo, the little son of a Genoese wool-comber, looked out over a great harbor full of vessels he saw many ships with three masts and a cloud of sails, but no oars. This was in the middle of the Fifteenth Century. Sailors had learned how to drive vessels forward with sails, against the wind. The old galleys were gone. Besides, clocks had been invented, and angle measuring instruments for taking the height of the sun. By taking the height of the sun above the horizon, at noon, a mariner could find his latitude. Then came the compass. The magnetic needle that always swung to the north, on its pivot, was the little polar star-finder. It could *always* be depended upon.

Inventions That Helped the Mariners

"There is the star, Captain! Behind that cloud. Trust me and go ahead," it said. Columbus looked at the compass on the darkest nights, and gave the bold order:

"Sail on! Sail on! Sail on!"

Scientific navigation began only with the use of the compass. To navigate is to *guide* a ship. The exploring navigators made ocean maps, setting down the places where there were rocks and reefs and islands, tracing coast lines, and marking harbors. Ships that followed used these maps, or charts, so they could take the shortest route between two points, and also avoid the nat-

The Compass and the Charting of the Sea

A Ship Caught by a Water Spout

Here is an unfortunate ship being driven right into a water spout. It used to be thought that these water spouts were made by whirling winds sucking up the water from the ocean, much as they whirl those pillars you have seen along a dusty road in August, but the spouts are not made in quite the same way. They occur when there is lying on the surface of the water a layer of warm, moist air. Then along comes a colder current. The colder air, being heavier, sinks, and causes a rapid upward rush of the warmer air. As this warm air rises, air from all sides rushes in to take its place and these currents, one coming from one direction and another from an opposite direction, get to whirling and produce a vacuum within the whirl. Then, the heavy clouds no longer held up by atmospheric pressure, dip down and pour out their rain in a perfect Niagara which no ship—not even the biggest and the stoutest—can withstand. These water spouts are found most often in tropical waters.

The Little People and the Striped Sea

Courtesy Scientific American. © Munn & Co.

Here is a mystery of the sea that perhaps you may explain some day. This much is known about it; that the stripes are the light given out by those same little painters in "blue and green and white" that the Ancient Mariner tells about. But just why the light should appear in stripes is not known. One suggestion is that they are due to the disturbance of those phosphorescent sea creatures when the waves are stirred by the wind. Then when the wind dies to a calm, as you see it has done here, the stripes appear in what were the troughs of the waves.

ural dangers by the way.

When the oceans were charted no one was afraid to go to sea. Within a hundred years after Columbus the waters of the earth swarmed with ships. The people of the Old World had been shut up so long! They were like caged birds when the door is opened. Their white-winged vessels skimmed every sea. The hulls of ships were built longer and lower, with sharper prows to cut the water. On many yards and spars, from three tall masts the sails were multiplied and spread to every breeze.

The Romance and Adventure of the Sea

Those were the days of romance on the sea! They were the days of the East India trade, of whaling voyages, of fights with Barbary pirates, and great naval battles. We had our part in all this bold adventuring. The American Colonies built ships, and most New England boys went to sea. The poet, Longfellow, was born in Portland, Maine, a shipbuilding city. Everything about ships and the sea charmed him. He described every sort of boat, beginning with Hiawatha's canoe. He saw a sea-fight. It was in the war of 1812, and it was between two frigates. He says the battle "thundered over the tide." He speaks of the black wharves, the fort on the hill, the bulwarks along the harbor, the foreign sailors, "the beauty and mystery of the ships, and the magic of the sea."

Longfellow and the Mystery of the Sea

The people of the earth were just getting acquainted. There were

The Lighthouse and the Migrating Birds

Birds, during the migrating season, are attracted by the powerful beams of the lanterns in lighthouses as moths are attracted to the light of a lamp. This picture shows a lighthouse on Terschelling Island, one of the chain of islands which reach from the Zuyder Zee to Jutland along the coast of Holland and Germany. Because the little birds either dashed themselves to death against the lighthouse glass or flew around and around, fascinated and confused, until they dropped, the Dutch government built the railing around the lighthouse, which you see on the lower border of the picture, so that the tired little travelers could rest themselves.

strange lands to see, strange tales to tell, curious things to bring home. Why, when Longfellow was a grown man, Japan was still a fabled land, where white men could not go. Sailors told about the many different kinds of canoes that were used in the islands of the South Pacific. The Fijian boat is much like the Indian's canoe. But it has a high prow and an oar is used for a rudder. In all the rivers and along the coasts of China, sailors found the Chinese junk boat that was quite as good as the vessels of Columbus' fleet. No doubt the Chinese and Japanese and South Sea Islanders have wonder stories about the building of their first boats. We discovered that other people were clever and bold, too. That took a little of the conceit out of us.

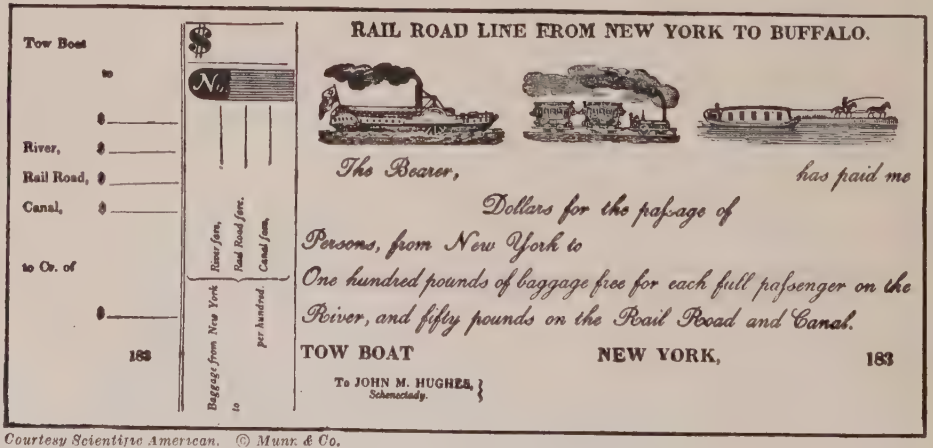
The Boy Who Put the Steam to Work

Now the sailing vessel is beautiful. And it has not disappeared from the ocean. It still carries slow freight. And many men think it more fun and more sportsmanlike to use sailing yachts for races and pleasure voyages. But there was always one serious trouble with them. They had to depend on the weather. If the wind failed, the ship lay becalmed. If the wind blew too hard, the sails had to be furled; men needed a power that would drive a ship at a steady gait in all weathers. No

The Departure From Havre

This picture shows the port of Havre on the northwestern coast of France. The docks, which lie south and southeast of the town, are very extensive. The picture represents the time when the transatlantic sailing vessel had not yet got rid of its masts and sails. Although, as you see, the big ship uses steam, it still has two masts. To the right of it is a little side-wheel steamer. In the foreground is a little boat with a sail, while near the quay is an oar boat and a small two-sailed vessel.

A Land and Water Ticket



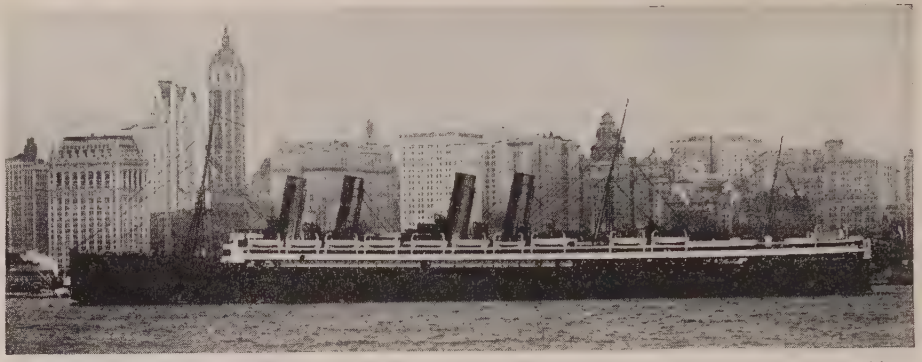
Courtesy Scientific American. © Munn & Co.

This is a railroad ticket of the early 30's when people made the journey from New York to Buffalo partly by railroad, partly by river and partly by canal.

Rescuing Passengers From a Sinking Ship

Great ships, in spite of all precautions, are sometimes swallowed by the sea. The vessel that is sinking is the Dakota. The boat in the distance is a sister ship, the Missouri, which is sending its boats to take off the passengers. This accident occurred before the days of wireless telegraph, and it was only by good fortune that a vessel happened to be in the neighborhood of the Dakota and saw her signals of distress.

The Ocean Liner and the New York Water Front



It is difficult for one who has never seen a great ocean vessel to realize what an enormous thing it is. This picture, and the one on the opposite page, will enable us to form some conception of the vastness of these floating cities. It shows a transatlantic liner with several blocks of New York's skyscrapers in the background. The length of the vessel is 919 feet.

one dreamed that such a power would ever be found.

"The kettle began it!"

That's the way Dickens begins one of his stories. That wasn't the same kettle, and it began a different sort of story. You know about the little Scotch boy, Jamie Watt, and the dancing lid of the teakettle. "If steam is as strong as that, I'll just put it to work," he thought. He did put it to work pumping water from mines, hauling ore cars, and turning wheels in factories. Robert Fulton set steam to turning paddle wheels on the sides of a boat.

The Wonder-Working Teakettle

His steamboat, the "Clermont," went up the Hudson River in 1807. A witty passenger said it looked like "a back-woods sawmill, set on a scow and on fire." But handsome is as handsome does.

The smoky, greasy steamboat could show its heels to every white wing on the river. Ocean vessels used both steam and sails at first, for when wood was burned, it was hard to carry enough fuel. Then they had to find out how to get the most steam out of coal, and build ships with big coal bunkers. Many questions are still troublesome, and builders find out new things every time a new vessel is launched.

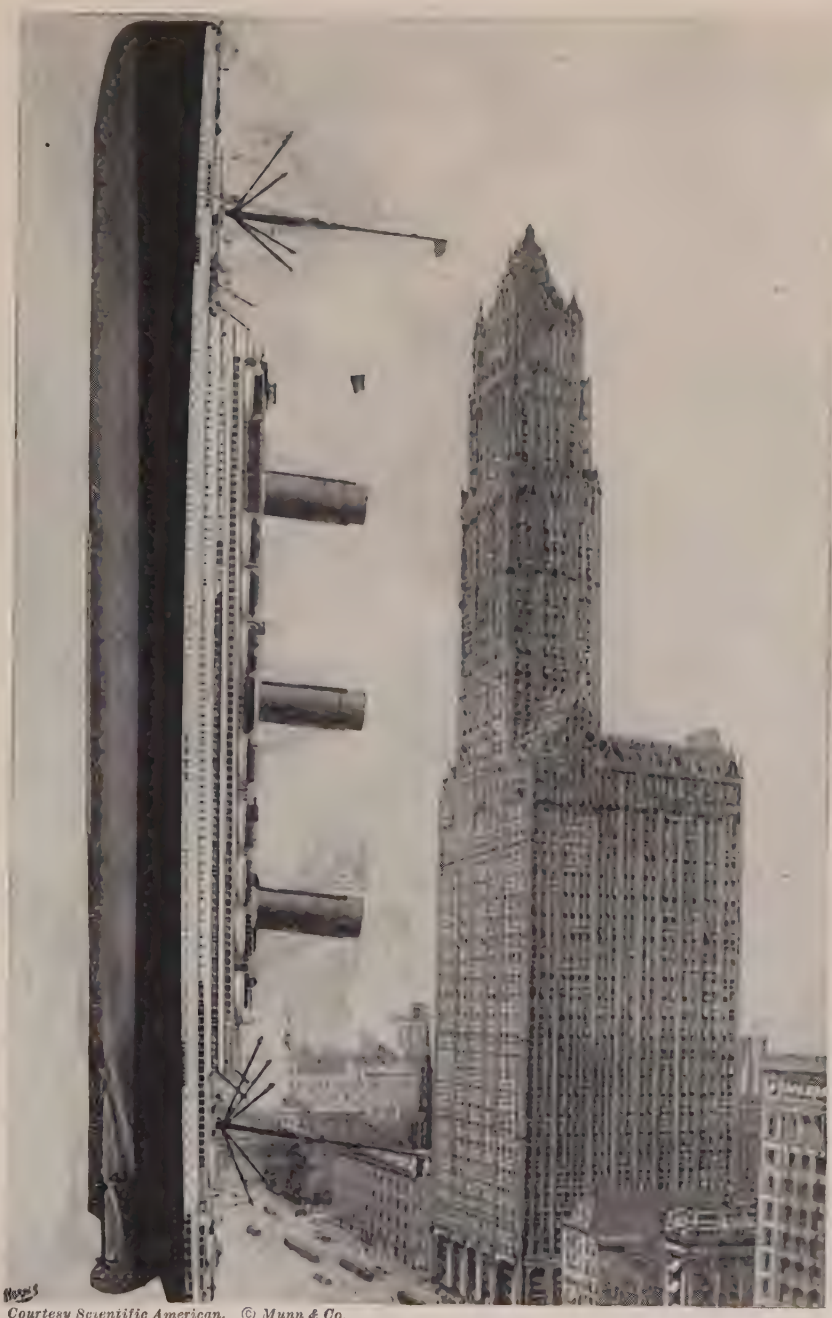
The Iron-Clad Knights of the Sea

See what we have done in a hundred years. Look at Fulton's little "Clermont" and then at the big, steel-hulled, four-funneled six-storied ocean liner. We have learned more about shipbuilding in the last century than was learned in all the rest of the time since the world began. For one thing, we learned that an iron ship will float. The "Monitor" of our Civil War, that queer looking tub on a raft, was the first iron-clad, and it won a sea fight.

The Monitor, First Iron-Clad

The man who built it first made a wooden ship, and then bolted iron plates all over it. It was the first sea knight in armor. Then he had another idea. He set up a big, round, revolving gun room. A gun would shoot and run away, so the enemy could not disable it. But in a moment the gun was reloaded and back again. This revolving gun room was a turret. All battleships

If the Liner Stood on End



Courtesy Scientific American. © *Munn & Co.*

Of course, these giants of the ocean don't stand on end alongside of great buildings as one is shown doing here, but only by such comparison can we realize the immense size of modern vessels. The Woolworth Building is 792 feet high, but this steamship is 919 feet long, and if we could stand it on end, the ship would reach over 100 feet higher into the air.

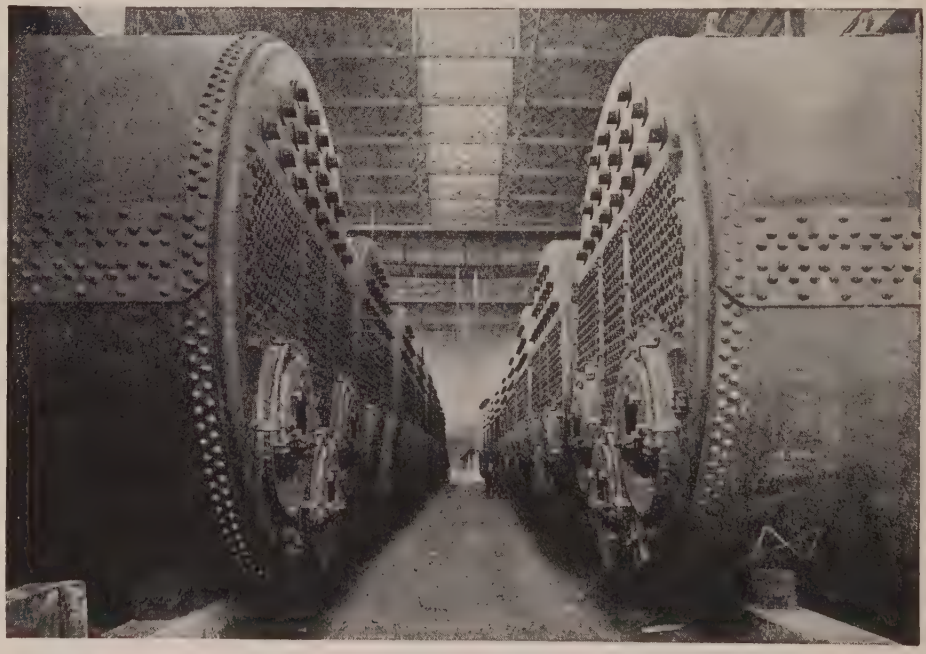
have turrets today. And "ironclads" are in every navy. They are not made of iron, but of steel armor-plates, riveted together. For their size they weigh much less than the old ships of oak timbers; and they ride higher in the water.

If those boat builders of old times, who had story-tellers and poets to sing of their wonderful labors, were to come back, they would find nothing that they could do in a modern ship yard. There is no work for bark strippers, skin dressers, timber joiners, sail weavers or pitch boilers. They would not know how to join the seams of iron and steel plates with red-hot rivets, and calk them water tight with chisels and compressed air hammers. They would stare in bewilderment if asked to set up a steel girder, a steam boiler, or string an electric wire.

If the Ancient Builders Should Come

But the launching of the ship! That part of it Ulysses and Jason, Ericsson and Columbus would understand. We still build vessels on a gentle slope at the edge of the water. We make the ways slippery with soap, as they did with fish or olive oil. Just as of old a great crowd gathers on deck and on the shore, whenever a new vessel is launched on the wave. With a great cheer the huge iron whale goes with a rush and a mighty splash, as an engineer "heaves her with levers to the sea."

The Palaces of the Sea

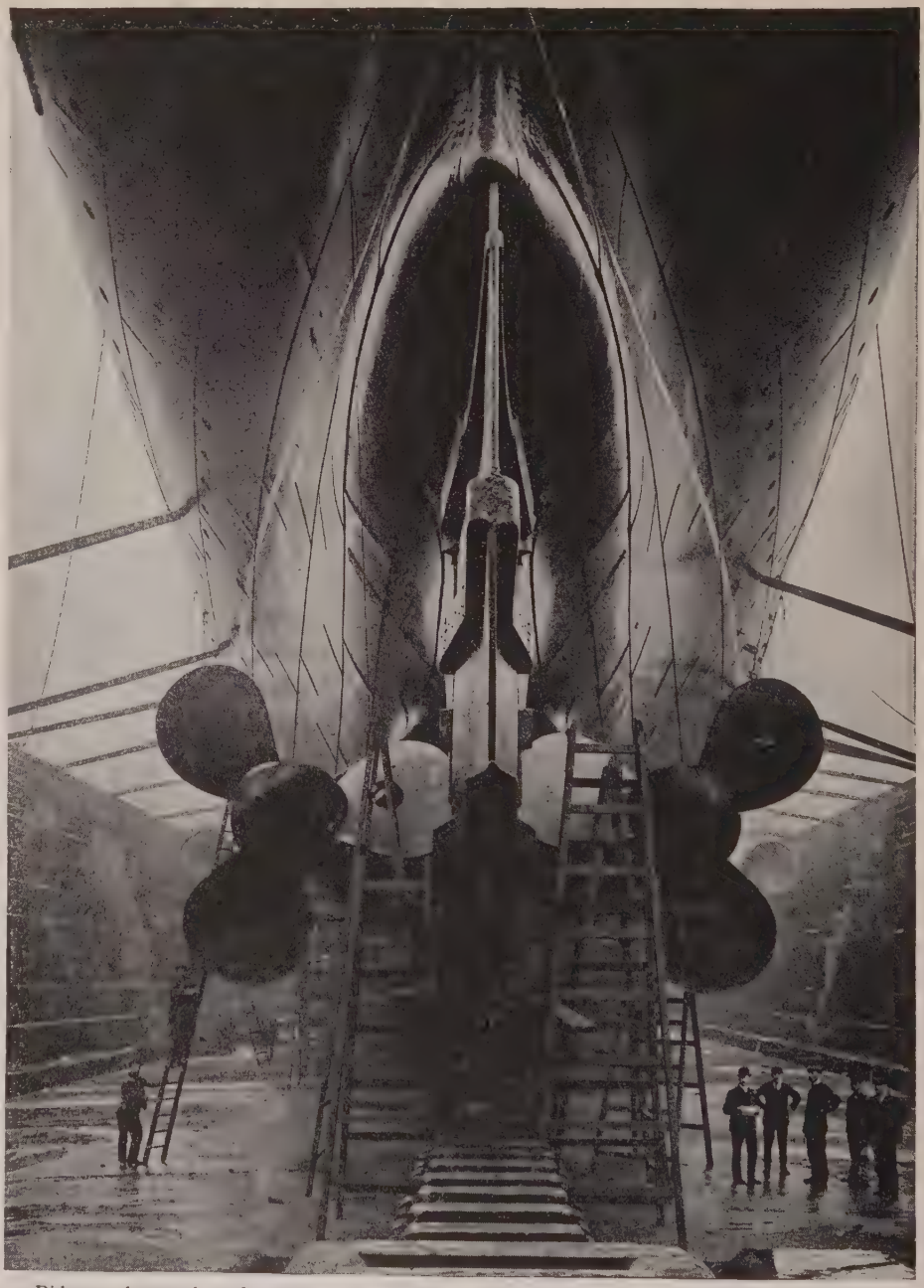


Here are the enormous boilers that are necessary to supply the steam with which an ocean vessel is driven through the waves. These boilers have just been set up in a newly built ship. The men who attend to these boilers have the hardest work on the ship. While the passengers on deck are chatting, reading, playing games, or listening to music, the firemen and engineers, far below, must keep the fires of these great boilers going. While the passengers above are enjoying the cool and embracing breezes of the ocean, these men work in an atmosphere so hot that they have to have air pumped down to them constantly and distributed by electric fans.

How the Boilers Get Aboard

This shows you how the big boilers are put aboard a vessel. This particular boiler weighs 105 tons. As you can see, it is being handled by one of those remarkable pieces of machinery known as cranes. They seem to have almost human intelligence in the way in which they pick up things and move them around where they are wanted. This is accomplished by means of steel cables running through pulleys, and the whole machine is operated by an engine in the crane.

How the Big Ship Pushes Itself

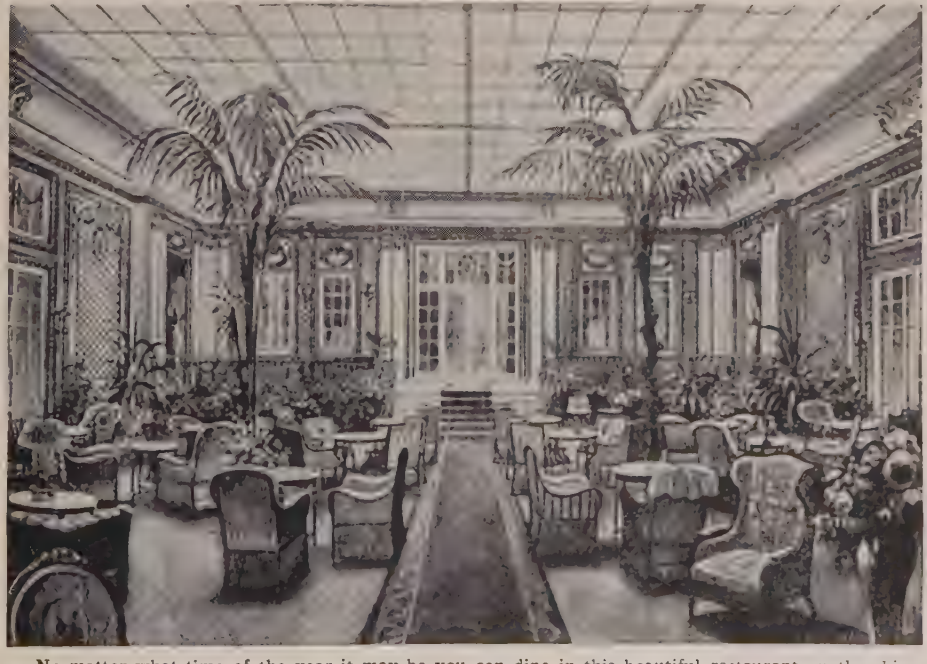


Did you know that these steam-propelled vessels push themselves through the water with a kind of whirligig turning backwards? Here you can see the twin "whirligigs" on the big liner on either side of the rudder. You know your whirligig turns because the moving wind strikes against it. Here the vessel moves because the whirligigs or screw propellers, as they are called, are turned by the great engines inside the ship and so push against the water.

One of the Beautiful Rooms in a Big Ship

You see in the center of the picture here a drop curtain, for in these magnificent floating palaces they have theatres in which theatrical performances are given. This part of the ship is called the lounge, because it is a place where people can lounge or saunter about. Dances are given on the floor of the lounge to music furnished by the ship's orchestra.

The Restaurant and Winter Garden



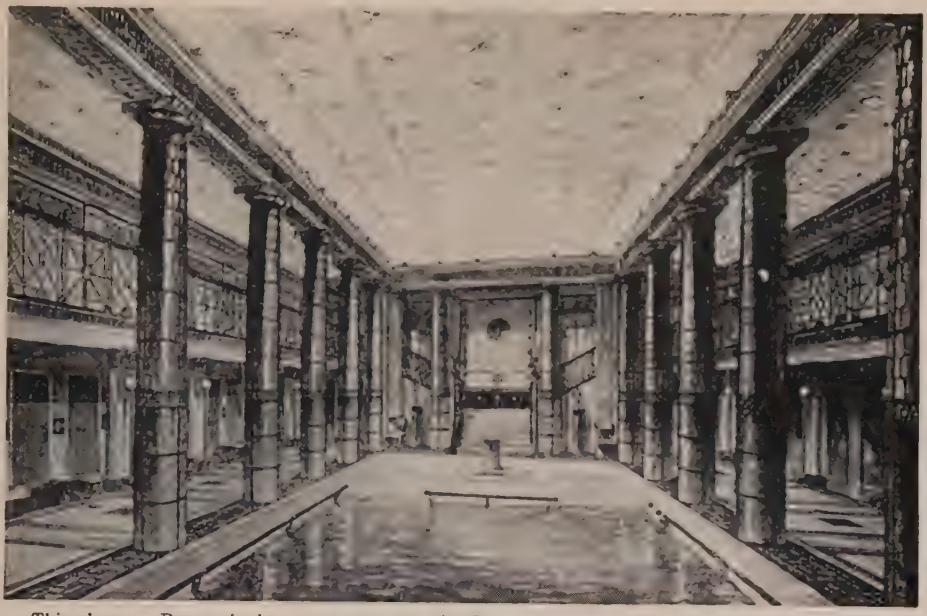
No matter what time of the year it may be you can dine in this beautiful restaurant on the ship, with palms and other tropical plants about you. In addition to this there is a grill room, a tea garden and other delightful places for meeting one's friends and dining with them.

A Cozy Corner of the Drawing Room

Drawing Room of Private Suite

The upper of these two pictures shows a cozy corner on the ship, while the lower picture is that of a drawing room of a private suite. In such an apartment as this you might easily imagine that you were visiting in some palatial home on land. You are hardly reminded of the sea by the rolling of the vessel since it is of such tremendous bulk that it is but little affected by an ordinary sea.

The Luxury of Ancient Rome



This shows a Roman bath on an ocean vessel. It is built in the same style as the baths of the Romans who were famous for their devotion to this form of luxury and the rich appointments of these places were famous. This pool is 39 feet long, 21 feet wide, and 9 feet deep.

This Is the Gymnasium

Here we are looking into the gymnasium with apparatus of all sorts for taking systematic exercise. In addition to this there is a running track on the ship and a court for playing the game called "Squash." Squash is a game much like "rackets" and is played in a walled court with soft rubber balls and bats like tennis rackets.

The Toll of the Sea

The artist here gives you a striking picture which enables us to realize the enormous loss of ships at sea as the result of accidents. In a single year, on an average, more than 1,000 ships go down. As a result of numerous accidents, vessels have been made much safer in recent years. One of the most important improvements is the doubling of the hull so that the ship is really a ship within a ship. The outer shell may be pierced and the vessel stay afloat so long as the inner shell is not pierced also.

Not all vessels that are damaged at sea go down. Many of them are so injured that they have to be abandoned by their crews and go on drifting in the ocean currents for years and making life dangerous for other vessels. Most of them are schooners laden with lumber. This is why they keep above the water so long. These wandering wrecks are called "derelicts." A ship colliding with them may sink then and there or, as happened once to the great Mauretania, the propellers may be so bent by striking a derelict that they pound against their own hull. Some of these derelicts have remained afloat for two years and have been carried thousands of miles by the currents. Every so often the government sends out naval vessels which hunt for them, put dynamite sticks aboard and then, by electricity from a safe distance, blow them up. This is being done to the derelict in the picture.

Education Prevents Accidents

EVERY person is a member of a number of circles of which the family circle, the social circle, the business circle, the church circle, are examples. There are other circles of which each one is the center rather than a member. Among these are the circles of our joys and sorrows, of our likes and dislikes, of our thoughts and feelings, of our health and illnesses.

These circles, of which we are members and centers, make up the machinery of life, as the wheels of a watch make up its machinery. Intelligent care must be given to the machinery of a watch, so that each wheel may be in repair and doing its proper work, care must also be given to the machinery of life, or some one of the many circles of which this machinery consists will cease to play its part in a well ordered life.

The Wheels of Society

Among the circles that make up the machinery of life, none is more closely related to our well-being than the health circle. Within it are a number of smaller ones. Of these, the circle of dangers that surrounds us constantly should not be neglected. Each one of us is ever the center of possibilities of accident, which should never be ignored.

Scissors Are Dangerous

Suppose this little girl leans forward suddenly to better watch her brother's work? Those sharp pointed shears will very likely pierce her eye, or injure her otherwise. Children should only use scissors with rounded blades.

It is far better to know how to prevent illness than it is to know how to cure it. One should also know how to give first aid to the injured, but it is wiser to know how to avoid the dangers that bring on these injuries.

Dangers from Many Sources

Since we cannot escape from these encircling dangers, we must learn how to guard against them. Our pioneer ancestors studied the ways of wild beasts and of Indians. They were skilled in woodcraft. We of today must study the action of express trains, street cars, automobiles and aircraft. We must know the nature of gas, gasoline, and electricity; for while these are humble servants when understood and handled according to their nature, they are deadly wild beasts when approached by the careless and ignorant. Children, in particular, should be taught about these modern dangers.

Adequate Education in Safety

Adequate education in safety consists, first, in pointing out the dangers; second, in teaching how the dangers may be avoided; third, in stimulating the conscience so that each shall look out not only for himself, but also for others. Our duty toward our neighbors is as clear as our duty toward ourselves.

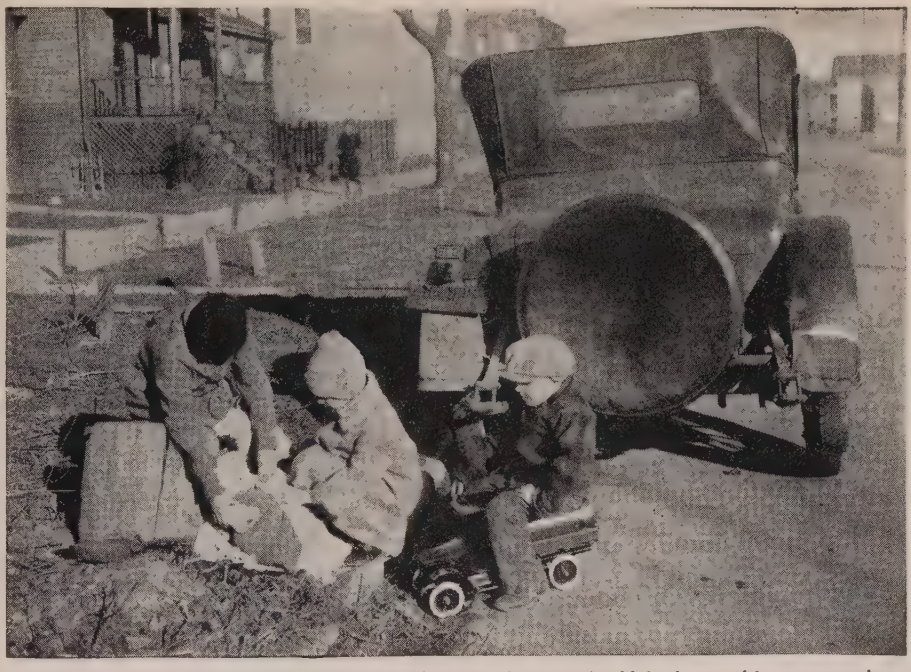
The Circle of "Safety for All"

You are the center of this circle, which may be divided into six parts, as is indicated by the diagram at the beginning of this article.

The diagram puts before us the fact that the dangers that encircle us are in the home, on the street, in connection with railroads and fires, and that they are not absent even in our sports.

This fact should not discourage us;

Don't Play Between Motor Cars



Playing in the street is very dangerous. Suppose that car should back up without a warning—what then? Motorists should also be sure that the way is clear before backing up.

we must simply face the situation, and realize that knowledge is far better than ignorance as a guide in life, and in the circle of "Safety" it becomes an insurance against disaster. When we appreciate this we shall go about the world courageously.

Knowledge and Courage

Safety at Home

Home, you feel, is a place of refuge. Here, if anywhere, there is safety. And yet the very conveniences and luxuries you enjoy have their elements of danger.

Electricity is one of the safest means of producing light, heat and power, when the appliances for its use are properly installed and are handled with reasonable care.

Regardless of this fact, fires and serious accidents occur all the time, sometimes causing death. Most of these accidents happen because people are ignorant of simple but necessary precautions, and because they are thoughtless or careless.

Hazards of Electricity

Worn insulation on electric wires is a common cause of fires and personal injuries, especially to children. Persons are sometimes killed in their own homes by touching an uncovered wire carrying an electric current. Touching such parts is especially dangerous if the hands are damp. Children's hands are usually moist enough to increase the danger of electric shock. When the body is damp, it is a better conductor of electricity. For this reason great care should be used. You should never touch the metal parts of lamp sockets, fixtures or other devices, in any room such as a kitchen or laundry room, with a damp floor.

The fuse acts as a safety valve for the electric current. If the circuit is overloaded by the use of too many lights, or by a short circuit in one of them, the fuse blows out. This shuts off the current and prevents the wires from becoming overheated.

Reason for a Blown-Out Fuse

With the 110-volt circuit used in most homes and apartments, no fuse of more than 10 amperes should be used. If the fuse blows out frequently, there is probably something wrong with the wiring. Do not use larger fuses, but have an inspection made.

Toasters, irons and other electric appliances should always have the current turned off when not in use. Many fires are caused by an electric iron becoming overheated.

The stores are full of fascinating toys operated by electricity. Toys operated by a dry battery are safe, but those which have to be connected to a lighting socket may be dangerous.

Dangers in Electric Trains

When buying such toys, be sure and find out if your service is what is called "alternating" or "direct current." If it is direct current such toys should not be used. Most electrical toys are reasonably safe but many are cheaply constructed, and are serious shock and fire hazards. Better be *sure* than risk an accident.

Is your radio set absolutely safe?

Is Your Radio Safe?

You say at once, "Why, there is no danger from a radio!" But there *is*, if you neglect a few important details, it may become a real menace in your home. No chances should be taken with *any electrical* equipment.

Hailing a Ride

Motorists should never "pick up" boys asking for a ride. This encourages a dangerous practice.

Many boys and grown-ups, too, like to experiment with their radio sets, they like to try out different lighting circuits and high voltage systems. Even the current of a 6-volt storage battery is enough to start a fire if the wires leading from them become crossed.

There is also some danger from lightning, if you have an outdoor antenna. This may be avoided by a ground wire running in a straight line to a permanent ground, preferably a water pipe; a gas pipe is unsafe. Never attach aerials or other wires to electric light poles, or over or under other wires. Many deaths and serious injuries have been caused by the accidental contact of outdoor aerials with electric light and power wires.

Wires through building walls or partitions should always be protected

Don't Let Your Skates Run Away With You

Education in safety will show the danger in practices like this.

by a continuous tube of porcelain or rubber, extending at least five inches on either side of the wall. This protective tubing must also be used whenever the lead-in wire comes within four inches of light or power wires. The ordinary insulation on the wire is not sufficient protection. As much care should be used in installing radio equipment as you use for wiring the house for electric lights.

Fallen wires near the home are a common cause of injury and accidental death. Especially after a severe storm, wires are likely to be broken, and an unsuspecting person may push one out of the way and receive a fatal shock. The *safe* way is to leave all fallen wires strictly alone. Children especially should be warned against this danger. The electric light company should be notified to take the wire away.

Dangers from Fallen Wires

Children, boys especially, should be cautioned about throwing sticks, strings or pieces of wire across electric wires, and when they are flying kites, care should be taken to keep them away from overhead wires.

If you use gas for lighting, cooking or heating, you have an ever present danger. There is the possibility that one of the many joints in the piping may leak. A lighted match may cause an explosion, if there has been such a leakage.

The gas itself is not explosive. You know this, for you have often set it on fire as it comes from the burner. But, when it becomes mixed with air, it is very explosive. For this reason you should hold the lighted match to the burner before you turn on the gas, so that it may find the flame before it mixes with the air. If for any rea-

Dangers from Escaping Gas

son your match goes out, be sure to turn off the gas while you are lighting another. A little girl once forgot to do this, and the resulting explosion singed her hair and burned her face badly. She had a narrow escape from serious injury.

Safety in Use of Disinfectants

When you are ill, you take medicines. In case of contagious diseases you may need to use disinfectants. Many medicines are helpful in small doses, but very harmful in large ones. Most disinfectants and fumigants are poisons, and must be used carefully. A young mother was fumigating her home with cyanide gas, and the fumes caused her two baby girls to become unconscious; both had to be taken to the hospital. One of the children was dangerously ill for many days.

You may not be to blame for having poisons in the house, but you are inexcusably to blame, if you leave them about. There should be a high shelf or cabinet, removed from easy access, where all poisons are kept. Moreover, the bottles should be of some odd shape, plainly marked "POISON" in red letters. One safe plan is to fix a pin in the top of the cork or cover, point upwards.

Cautions About Poisons

It is best to buy poisons for immediate use only, and to throw away the unused portion. Better waste a little than have the baby, father, mother or other members of the family suffer injury.

Stairs Are Safer

If this boy's foot slips, he may receive an injury for life on the prongs of the fence.

Safety on the Street

You leave home, and at once you are on the street, either walking or riding. The street belongs to everybody, everybody uses it. A thousand people will have a thousand different errands, and a thousand different reasons for hurrying or going slow. Each one of the thousand ought, therefore, to be careful of himself and of others, while he is intent on his own business or pleasure on the street.

There are motor cars, huge busses and trucks everywhere. Every day hundreds of people are injured in automobile accidents. The hazards to school children are so great that in all large cities there are policemen stationed at each school, to direct traffic and see that little children are able to cross the streets in safety.

Dangers from Motor Cars

Safety Rules of Motorists

Many people who drive cars are not competent. Some day the law will require all persons to pass a test proving they are physically and mentally fit

and know how to drive an automobile safely. You wouldn't think of riding in an airplane if you didn't have a licensed pilot, would you?

The demands for safety are more strict than the demands of the law, and this is the way it should be. Laws are made to insure justice. A full appreciation of safety saves life and limbs, no matter who is to blame.

Speeding Costs Thousands of Lives Each Year

A moment or two saved by reckless speeding is not efficiency, for speeding may result in a smash that will lay up the car for several days, and you for several weeks or months. Hurrying to get ahead of a train, a street car, or another car saves only a moment or two and the gain is not worth the price—there is too much danger of accident.

Never touch fallen wires—they may be "live"!

A reckless driver, speeding towards an intersection, ran his car onto the sidewalk to avoid a collision, and knocked down two girls who were on their way to school. One of the little girls was killed, the other badly injured.

Slow up for all turns in the road. When it is impossible to see what is coming from around the corner, be prepared to stop. Sound your horn a short distance from the corner.

Drive slowly at bridges and at culverts. A bad rut or a stone in the road may throw your car against it, or run you into a ditch.

When attempting to pass another car going in the same direction, start turning out (to the left) at least 75 feet to the rear. If you get up too close, you cannot see the road ahead, and you may turn directly in front of another car coming toward you. When you have passed a car do not cut back into the road nor slow down too soon.

Always be careful when backing. Sound horn three times; signal other cars, and look *back* to see where you are going. Mirrors are valuable at all times.

Clean windshields give a clear view ahead. In rain or snow, every car should have a rain visor or windshield wiper to keep the glass clear.

Be sure to signal when driving toward or away from the curb.

When leaving the car, shut off the engine, remove the ignition key and set the emergency brake. Cramp the wheels to prevent the car from moving accidentally.

Safety on the Street Cars

Street cars carry thousands of children to school every day, as well as many more thousands of men and women to their work. These simple safety rules will prevent accidents, if carried out:

1. Carry packages in the right hand, use the left hand to assist in getting on and off cars.
2. Don't try to get off or on until the car stops. (In large cities the street cars are equipped with automatic equipment which prevents doors

The Unseen Car

In crossing the street after alighting from one car, remember that another may be coming from the opposite direction, and wait for it to pass.

from opening until car stops.)

3. Face front when leaving the car.
4. Look both ways before crossing to the sidewalk.
5. Never pass behind a car without first looking to see if a car or automobile is coming on the other side.
6. Never pass in front of a car unless the motorman signals you to do so.

Taming the Steam Giant

The steam engine is a giant of the most friendly nature and of tireless energy, but if you get in his path when he is at work, he will trample you under foot without remorse. He has no mind and cannot think of "Safety" for you. When you go where he is, you must do all the thinking.

It is remarkable how few excusable accidents there are on the railroads. A train is about the safest place you can be in, provided you do your part in obeying the laws of powerful moving bodies.

Children often run into danger through the childish tendency to be "smart." Grown-ups incur danger through a desire to "save time." Railroads have at all crossings either gates, tended by gatemen, or signs with the words: "Stop, Look, Listen" printed on them in large letters. Many states have a law compelling all motor cars and other vehicles to come to a full stop at all railroad crossings.

About Crossing the Tracks

1. Obey the watchman.
2. Stop when the gates are down, never crawl under.
3. Look both ways before crossing tracks.
4. When driving a motor car, truck or other vehicle, come to a full stop at a railroad crossing.

The railroads have been educating the public in Safety Habits for many years. This education has brought about a great reduction in the number of people killed at grade crossings. For instance, in 1911 over 9,000 people lost their lives at grade crossings. In 1927 the number was only 2,371. This fig-

Awful Loss of Human Lives

ure is still too great, and can only be reduced by obeying the rules of Safety. Think Safety and teach it to the children.

There are two ways of conveying electricity to the motor of an electric car or locomotive, by the overhead wire and trolley, and by the "third" rail. The first is not dangerous unless it breaks. The "third rail" can be touched by any careless person, and, therefore, becomes a danger of which all should be aware.

Don't Touch the Third Rail

The "third rail" lies beside the track. Electricity is drawn from it and carried to the motor by a sort of shoe on the end of an arm extending from the car. This "third rail" is in places covered by a wooden shield, but it is also entirely exposed for long distances. It is heavily charged with electricity, and wise people will keep at a respectful distance from it and prevent possible injury.

Always face the front when alighting from street car or bus.

Besides the dangers referred to in the foregoing paragraphs, there is another of a peculiar nature that is illustrated by the following incident:

Dangers to Fingers From Doors

A lady was standing with a number of other persons waiting for a seat in the dining car. The car swayed. She put out her hand to steady herself, and by chance it rested against the jamb of the car door. The next lurch of the car loosed the open door from its fastening and it closed with great violence, crushing the ends of the fingers. After a period of great pain the fingers were amputated.

Such accidents occur frequently, but as they are not fatal and the railroads are in no way to blame, little is heard of them. Never put your fingers where a door in closing may crush them. This is a good rule to follow at home as well as on moving trains. Children especially should be taught this rule.

Safety and Fire

Do you know that every minute in the day there is a fire somewhere in the United States?

A Fire Every Minute in Every Day

A thousand people, many of them little boys and girls, are burned to death every month in the year. Many thousands more are injured.

Besides all this tragic loss of life each year, $500,000,000 worth of property is destroyed by fire.

Almost all fires *could* be prevented. They occur because someone has been careless. More fires are caused in homes by careless handling of matches and cigarettes than any other cause.

You can pick up a paper any day in the week and read of some small child who burned to death "playing with matches."

Keep Matches Away From Children

The following tragic item is just one of hundreds that happen every day:

A Junior Traffic Officer

This young man is a school safety officer; he sees that the way is clear before the children cross the street.

"Leon Vest, 4 years old, suffered fatal burns today when his mother left him alone in the house for a few minutes while she ran to the home of her mother on an errand. The baby found a match and set fire to his clothing. A neighbor heard the screams and went to the rescue, burning his own hands in tearing off the blazing clothing. Leon died the same evening in the hospital."

Matches are dangerous things. You should buy safety matches of a good brand, keep them covered and out of the reach of children. If you should spill a box of matches, be sure to pick up *every one*.

Good Housekeeping Will Prevent Fires

The attic, cellar and all closets should be cleaned out at least once a year. All useless material should be burned.

Store the remaining materials neatly. Leave a passage between or around boxes and cases in a storage room. When storing clothing, be sure and remove all matches from pockets. Do not hang clothing near chimneys.

Bonfires cause enormous losses in city and country. Never light a fire when the wind is high or in a dry time of year. Always burn trash in a wire burner.

To light a match in a closet or a garage is dangerous. Always use an electric flashlight.

Christmas trees should be lighted with tiny electric lights instead of candles. One of the most tragic fires in our history happened on a Christmas eve in a tiny school house at Babb Switch in Southern Oklahoma a few years ago.

Use Electric Lights on Christmas Trees

The huge community Christmas tree caught fire when the topmost candle drooped, transforming the cotton balls used to trim the tree into balls

It Is Safer to Carry Skates

Skates are dangerous things to have on your feet when crossing a busy street. This little girl must take hers off before proceeding on her way home.

of fire. Two hundred people were trapped in the one-room building, mothers and fathers who had come from miles with their children to the annual festival. Little girls and boys were trampled underfoot, mothers died with babies in their arms—they couldn't get out because the one door opened inward. It took ten minutes to get the door open—the windows were barred with wire netting.

Thirty-five people, most of them little children, were burned beyond recognition—a dozen more will go through life as cripples. Babb Switch was a lesson to the world. The simplest safety measures would have prevented this catastrophe.

What Must We Do in Case of Fire?

The first five minutes at a fire are worth more than the next five hours. Little blazes are easily put out. With a good start, any fire may become a raging, destroying demon.

It is as important to know how to deal with fires that do occur as it is to prevent them from starting. In spite of precautions, someone may be careless. What then shall we do when face to face with the actual danger?

Children and grown-ups should be cautioned to "keep their heads"—always. We must act quickly, of course, but excitement may make us do the wrong thing. We are less likely to become excited if we have studied out in advance just what should be done in case of fire.

Attack a Fire at Its Base

If you have an extinguisher, every member of the family should be taught exactly how to use it in an emergency. There is no time to read directions, after a fire starts. Almost all fires are small in the beginning. The time to put them out is before they have had a chance to spread. The best way is to use an extinguisher, if there is one within reach.

An important thing to remember is

"A Thousand People on a Thousand Errands All on the Street at Once"

Clanging bells and honking horns add to the confusion of a busy street. Small children should never be allowed down town alone.

that a fire should always be attacked at its base. It is the burning material, not the flame itself, that should be drenched or smothered.

If water is used and the blaze is still a small one, it is generally more effective to throw on the water a little at a time, instead of all at once. Some blazes can be beaten out with a broom, a rug or a coat.

If you discover a fire, give the alarm promptly by calling "fire," unless you are in a crowded room. In a crowd, give the alarm quietly and try to keep the people calm.

For Safety Always Be Prepared

It is a good idea to be familiar with the nearest fire alarm box. Turn in the alarm, and wait beside the box until the firemen appear, so that you can direct them.

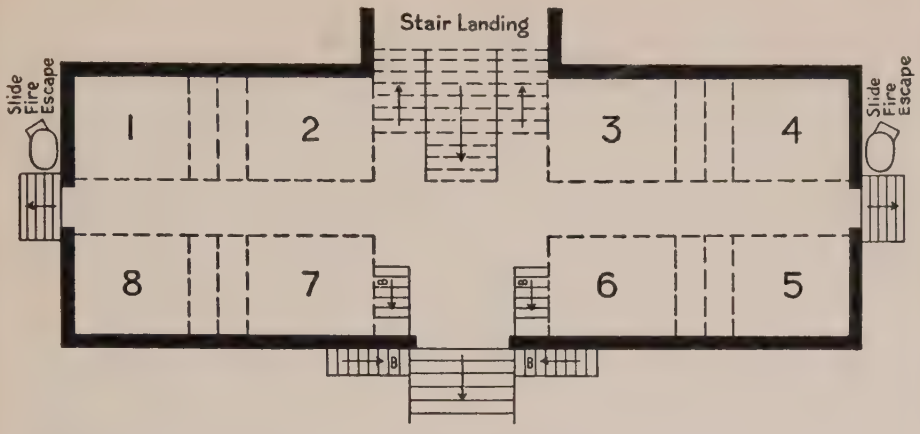
If you send in a telephone alarm, call the operator and say, "I wish to report a fire." *Also be sure to give the correct address.*

If your clothing should take fire, do not run. This only makes the flames burn more fiercely. Lie down and wrap up in a rug, overcoat, blanket, shawl or any heavy article that is handy. This will help smother the flames. If there is nothing handy, lie down and roll slowly and at the same time beat out the flames with your hands. Many children burn to death when their clothing catches fire. They should be taught these simple instructions early—it may save their lives.

Safety at School and in Public Places

The Golden Rule in Panics

It is a well known fact that more lives are lost by panic than by the fires that cause them. Nevertheless, we continue to get excited when safety depends on keeping cool. It is always safe to keep out of a crowd and always dangerous to get into one. Don't push and don't go where you are liable to be pushed. At school, and in all public



Instructions for a fire drill which will quickly empty a building of this or similar design are given below. The rooms on the second floor are numbered in the same manner as those indicated for the first.

places, the "Golden Rule" is the "Safety Rule"—"Do unto others as you would have them do unto you."

It is, of course, very foolish to be anxious and troubled about possible dangers when you go to school or enter a public place, such as church or the theater. It is equally foolish to close your mind to their existence.

The most serious of them all is the fire danger.

The following directions for a school fire drill are the result of long experience in dealing with this danger and can be adapted to any standard school building.

Fire dangers in the school can be practically eliminated even in non-fireproof buildings, by instruction to children which will control their conduct in case of panic, and by proper fire drill. (See diagram at top of page.)

As soon as the fire signal sounds, the children should stop work and form in single file in aisles, teacher opens the door, room captains lead and pupils follow by rows and pass at once to the street.

The teacher should be the last to leave the room, except in kindergarten and first grade, these teachers should lead their lines until captains arrive.

Rooms 1 and 8, followed by 2 and 7, pass out north exit to the street. If exit is closed, then reverse order out of west side of rear exit to alley and thence to position in west street. Rooms 4 and 5, followed by 3 and 6, pass out east exit to street. If exit is closed, then in reverse order out of south side of rear exit and thence to position in east street.

Order of Passing

The children in the second floor rooms will follow the same plan outlined for the first floor: those in rooms 9, 10, 15 and 16 move down the west side of the stairway to the landing, where they are joined by the other rooms—marching four abreast, they exit directly out the front door. According to the above diagram, these pupils pass to position in the south street.

Children should move quickly but carefully and not try to hurry—safety depends on keeping cool. To

prevent confusion, children should not talk until they are all in position in the street.

Children should keeps eyes and ears alert for directions. Following promptly any instructions given.

After reaching the street, children should remain in line until directed otherwise by the teacher. In case of a real fire no pupil may leave the line except by permission.

Return Order

When the "fire out" signal is given by the principal, follow directions of teacher and lead of captains, returning to rooms in reverse order of exit.

"Safety First" in Sports and Play

The very nature of sports creates dangers. The mind at play is off its guard. Under the excitement of the moment, risks are taken that would be avoided at other times. To make play deliberate and judicial would destroy its recreational values. And yet to be entirely oblivious to the probable outcome of certain acts is to court misfortune. It should be possible to take recreation heartily without recklessness. There is, in fact, little danger that children will lose their spontaneity at play when they have learned to "look before they leap"; that is, to apply in a sensible way the policy of "Safety."

Flipping More Dangerous Than Ever

It is fun to "flip" or hang on to street cars or automobiles while riding a bicycle and to jump on the back of wagons, to steal rides. Those who have been boys will not disagree on this point. But this sport was always perilous, and today it might almost be called suicidal. The swiftly passing automobiles and street cars are messengers of death to those boys who indulge in it.

In 1928, over 27,000 people were killed in motor car accidents—two-thirds of this number were pedestrians, a large number were children.

Dangers in Winter Sports

At the beginning of winter each year, children should be reminded of the dangers of ice sports, and should be told how to rescue those who have fallen into the water.

Although every child may not be saved from drowning, yet such instructions will be a restraint in the minds of many, like a detaining hand, and a guide in critical situations.

In one of the large cities, certain streets were blocked off for children to use their sleds; a careless truck driver ignored the signs and drove down one of these streets, running into a little lad on a sled, completely demolishing the sled and killing the little boy.

Three Dangers in Boating

Rocking the boat, standing up, changing seats, are the three perils that those inexperienced in the use of boats commonly incur. If those who do these things could realize that in the doing of them they advertise their inexperience and foolishness, they would be more likely to follow the example of the veteran boatmen. A boat is not a place to play in. This sport is confined to the few, but it takes a heavy toll of the careless. All children, especially boys, should learn how to swim.

Two Most Dangerous Follies

In all the circle of "Safety," this is the greatest and most dangerous folly. "I dare you to go out on the thin ice." "I dare you to swim across that wide place in the river." "I dare you to run through the fire." Such dares and their consequences have brought sorrow to many a home.

Students Drill in First Aid to Wounded

© *Pacific & Atlantic*

These are sixth grade youngsters in the safety finals in Los Angeles. Eighteen teams of six members each worked out first aid problems for broken safety rules. For the first three problems each team had all the necessary equipment, but only rags to work with in the last one. Seven minutes were allowed for each problem.

Children should never be allowed to handle firearms. They are not playthings, they are killing tools. Anyone, old or young, who points a gun or a pistol at another "in fun" is doing a very silly and a very dangerous thing. Many children and grown-ups are killed each year by "unloaded" guns. A red hunter's cap is a safeguard when two are hunting in the same neighborhood.

Never Play With Firearms

The Safe and Sane Fourth

During the last twenty years as many Americans have been killed celebrating the Independence as were killed in the war itself. In 1912 the number of Fourth of July accidents reported in the country was 988, in 1928 only 195 were reported.

How was this remarkable reduction brought about? First, by recognizing the danger; second, by passing laws regulating the sale and use of firearms, firecrackers and fireworks; third, by education; fourth, by substituting sane and really patriotic ways of celebrating for destructive, unpatriotic ways.

Wonderful Change in 20 Years

It is not necessary to take the risks of the battle field in order to show the love we have for our country. The noise and atmosphere of war became associated with the Fourth of July by chance, not because of any fitness in the association.

Let communities and parents everywhere protect the children, and foster a real patriotism by forbidding, on the one hand, the use of explosives, and

"Liberty Enlightening the World"

© *Pacific & Atlantic*

The Goddess of Liberty, a gift from France in recognition of the historic friendship between the two republics, stands on Bedloe Island in New York harbor. This statue typifies the idea of freedom. It is a symbol of liberty for every citizen of the United States. Personal liberty, however, does not mean that we are free to jeopardize our own lives or the lives of others by being careless or reckless.

by supplying, on the other hand, wholesome and enjoyable activities through which the great national holiday may be none the less a day to be looked forward to, but without dread.

The same injunctions apply to the use of fireworks on other special days —Christmas, for example.

"Prone Pressure" Saves Many Lives

Hundreds of people are saved from death by shock or drowning, or by asphyxiation, by the prompt application of the "Prone Pressure" method of artificial respiration. The following simple rules may save a life tomorrow. (See illustration on page 1252.)

1. Lay patient on his stomach, one arm extended directly overhead, bend the other at elbow. The face must be turned outward resting on hand or forearm, so that the nose and mouth are free for breathing.

2. Kneel straddling the patient's thighs with your knees placed just below the hip bones. Place palms of the hands on small of the back with fingers resting on the ribs, the little finger just touching the lowest rib. The thumb and fingers in a natural position, the tips of fingers just out of sight.

3. With arms straight, swing forward slowly so that the weight of your body is gradually brought to bear upon the patient. The shoulder should be directly over the heel of the hand at end of the forward swing. Do not bend your elbows. (This operation should take about two seconds.)

4. Now immediately swing backward, so as to completely remove the pressure, thus returning to the first position.

5. After two seconds, swing forward again. Thus repeat deliberately twelve to fifteen times a minute, the double movement of compression and release, provides a complete respiration in four or five seconds.

6. Continue artificial respiration without interruption (if necessary for at least two hours) until natural breathing is restored. Cases are on record of successes after four or more hours of effort.

7. As soon as artificial respiration is started and while it is being continued, an assistant should loosen any tight clothing about the patient's neck, chest or waist. Keep the patient warm. Do not give any liquids whatever by mouth until he is fully conscious.

8. To avoid strain on the heart when patient revives, he should be kept lying down, not raised up or allowed to get up, except on advice of physician. If no doctor is present by the time patient revives, he should be given some stimulant such as one teaspoonful of aromatic spirits of ammonia in a small glass of water, or a hot drink.

9. Resuscitation should be carried on at the nearest possible point to where the accident occurred. The patient should not be moved from this point until he is breathing normally of his own volition, and then moved in a reclining position. If weather conditions force removal before the patient is breathing normally, resuscitation should be carried on while he is being moved.

10. A brief return of natural breathing is not a certain indition for stopping resuscitation. Sometimes the patient stops breathing, after a temporary recovery of respiration.

In carrying out resuscitation it may be necessary to change operators. This change must be made without losing the rhythm of respiration.

Circle of Safety Completed

Thus we have gone around the "Circle of Safety for All." The journey has not been in vain if we have come to realize that there are dangers all about us, whether we recognize them or not; and that we can walk among them in comparative safety, if we will take for our motto,

"All for Safety, Safety for All."

Acknowledgment given National Safety Council for cooperation in the preparation of this article.

There's Room at the Top

The hill of success may be steep, boys,
And hard work it may be to climb,
But the way grows smooth towards the top, boys,
And it's only one step at a time.

Be sure you are honestly shod, boys!
Take the staff of Self-help in your hand,
Watch out for the rough, rocky tread, boys,
And trust not to gravel or sand.

Look not far up into the clouds, boys,
Nor yet on the valley below,
But steadfastly, patiently, climb, boys!
Each step of the way learn to know!

Respect well the right of the road, boys,
Let others more swift pass you by,
And fail not to hold out a hand, boys,
To all those who stumble and sigh.

There's plenty of room at the top, boys,
Though crowded the pathway, and long,
And no one need fail in the end, boys,
If he's honest and patient and strong.

LILA T. ELDER.

Education by Play

Dutch Windmills

Have you ever read about Holland, the little country where the Dutch children live?

There are many interesting things here and one is the windmills we see everywhere, used to pump water. See if we can show how these windmills look.

Each child has a partner. Stand with backs together, right arms raised obliquely sideward upward, left arms down. Move the arms slowly up and down until the position of the arms is reversed.

This exercise should be done in time to music.

IT is eleven-thirty in the fifth-grade room; recess was over nearly an hour ago, and noon is still a whole half hour away. The children are studying the history lesson which comes right after dinner. The room is stuffy because the windows cannot be opened wide without exposing the children to drafts.

"Attention!"

Forty pairs of eyes are raised as the children straighten into position.

"Stand! You may open the windows, Grace and Paul."

Living History Over Again

For five minutes the children act out a feature of the coming history lesson, in the brisk, clean air blowing in from outside. The

lesson deals with the landing of Columbus, and the children first imitate the weary little bird coming to meet the ship—swinging their arms slowly up and down to represent flying—then they become the eager sailors, peering first to the left, then to the right to sight land, and finally they plant the Spanish flag in the new land. When, at the signal, they sit down again, they are refreshed in body and in mind, and so is the teacher, smiling into eyes that smile back again, as the children open their histories with the strained, dull feeling gone, with clearer heads, and greater interest in the work.

Playing That You Are Columbus

While, to secure the best physical effects from these correlated exercises they should take place out of doors as much as possible, it must be kept in mind that they are more than mere athletics; they have a purpose beyond purely physical development. Such exercises are a means of expression; the activities of mind and body react upon each other. The history lesson becomes vivid and real. The child has not lost the precious gift of imagination, as adults do, and in acting out his les-

These Are Not Mere Athletics

Learning Grammar by Playing

© *Wide World*

How would you like to study grammar like these children? Pupils are given names of the parts of speech written on cardboard and are enacting an amusing, educating little play. In the course of the dialogue, the noun, pronoun, and the other parts of speech explain their function while they act out the play!

This picture showing the parts of speech in action was taken at Forest Hills, L. I. The game was invented by Kerry Conway.

Teddy Bears

We are teddy bears which Santa Claus left on the Christmas Tree for a happy little boy! See how we can nod our heads ("One—Two") and move our arms (bend arms forward and straighten on ("One—Two"). Little boys and girls like to play with us almost as much as they do with their drums and dolls. Watch us hop from place to place.

son in this way, he loses himself in the part. He really becomes the bird, the sailor. The lesson is no longer work, but play, and, as Froebel pointed out, play is of the greatest importance in the life of the human being and so in our scheme of education. It is in play that the child best expresses himself; that his imagination is most easily cultivated.

Children, more than adults, need frequent changes of occupation, so that a brief period of relaxation, which is at the same time recreation and a means of instruction, is beneficial to the child's body, while, by fixing a fact or idealizing a character, it aids his mind—adding to his store of knowledge, broadening his vision and experience.

Besides these effects, such exercises develop grace and self-control in a way that athletics do not. We measure the football player's efficiency, not by the grace with which he kicks, but by the force and precision with which he kicks. But by making physical exercise rhythmic—that is, by the introduction of music—the child gains poise and control. Instead of admonishing the child to stand erect, appeal to his imagination and his pride by suggesting that he be a soldier, brave, sturdy and true, for the soldier always stands straight, with head up, and always obeys orders instantly.

Appeal of the Play Idea

Relation to Composition

This "playing out" of history, geography, nature study, etc., has obvious relations to the work in composition, written and oral. The artist, in preparing to sketch a man making a gesture, first makes the gesture himself to see how a man would act, and so gets the feeling. To express well we must realize vividly, and these correlated physical exercises greatly clarify the child's impressions. He first expresses ideas by action; it is then easier for him to express them in words.

Stories suited to the season always have a special attraction, and every season of the year is rich with opportunity and material. In the autumn, when the leaves are falling, take the children to the woods—really, if you can, in imagination if you cannot. Let them actually, or in play, pile the leaves high with their rakes, and run and jump over them. In October take them out to gather nuts, or to play at making Jack-o'-Lanterns with which to send those delightful shivers down the backs of friends.

November is also full of historic interest, bringing the story of the Pilgrims, their journeyings, their hardships and their bravery. Let the children, in imagination, be Pilgrims, sailing over the water to Holland. Let them represent the big windmills, sail and row boats on the canals, go aboard the Mayflower and sail to America, where, in these "motion pictures," they build their own houses and schools, make their own shoes and clothes, learn from friendly Indians how to plant corn and make the strange new land habitable. Stories of the Indians are always fascinating to our own little primitives—the children. How they love to shoot arrows, paddle canoes, grind corn, and imitate the war dances!

More History Correlation

Then comes December, the children's own month—a veritable mine of material for the teacher. The Christmas story never loses its wonderful charm. We can play at going to the woods to get the Christmas tree and dragging it home to decorate and make ready for Santa Claus; we can visit the toy shop and imitate the host of toys collected there; we can be Teddy Bears, Jumping Jacks, jointed dolls and electric trains; we can play the drums, blow the whistles, and skate on new skates before we get them.

Christmas in Pantomime

Reproducing the Zoo

In imparting knowledge of animals and the love of them, do not confine your lessons to the book, but make the book alive by helping the children to play elephants, swinging arms and clasped hands representing the trunk, the arms stretching over head and tossing some article high in the air, as the trained elephant does. Imitate the strange kangaroo with his strong hind legs, who leaps over the ground at such a wonderful pace that even the "Giant with the Seven League Boots" might well envy him.

Exercises Easily Planned

To apply the physical expression idea to any lesson or subject, the teacher or mother has only to make notes of the actions in the lesson that can be simply expressed and that will appeal most strongly to children. The children will love to act out a story that is dear to them. Let them tell the story, with appropriate gestures first, and then omit the story—tell it wholly by the gestures, and always put swing, vigor and rhythm into the movements in order to get the full physical benefit from them.

Suggestions for study material suitable for acting out are to be found in the example of the children playing weather vane, pulling taffy, playing shoemaker, raking leaves, playing fireman, playing Easter bunny, and in the articles on Hallowe'en and Valentine's

Acting Out Pictured Knowledge

Tom Sawyer and Huckleberry Finn!

© *Wide World*

These children are enacting a scene in pantomime from Mark Twain's famous story.
Which one of the boys do you think is Tom?
Do you remember which chapter of the book this scene is taken from?
There are a large number of stories which can be dramatized in this way, providing fun and entertainment, as well as having a splendid educational value.

Day. Other articles throughout *Pictured Knowledge* abound in these action suggestions. For example, besides those already mentioned in connection with "We Discover America," there are:

1. How land rises from the sea —children squatting on their heels, then slowly rising and pushing their hands upward. The same idea can be used with the arms only, to indicate how mountain ranges are formed.

2. "How the Iceman Takes a Walk in Our National Parks": Children stoop as if picking up a stone, then slowly, with tension of muscles, raise stone above the head, drop it as the "iceman" does, and start over again.

3. In "What Is the 'It' that Rains?" let the children waltz in the school yard or in the home or home yard as described, to illustrate the double motion of the winds.

4. Imitate, by gesture, the different ways in which the moths and the butterflies hold their wings when resting, as described in "The Butterflies and the Moths."

5. The article on Sugar offers material for a whole series of lesson-plays. The children can represent the cutting, the bringing to mill, and the grinding of the cane, as well as the several steps in the process of refining.

6. In "An Old Pair of Shoes and Its Queer Relations" show, in play, how pioneer mothers made shoes. The mother stoops, rises, stoops and rises again as she shapes the shoe

around the foot of another child, who alternately advances one foot and then the other.

Similarly act out the scraping of the skin and the various other processes in leather-making adapted to pantomime, as shown in the series of illustrations.

7. In the Coffee story the children can pick berries, as described. An appropriate gesture representing pickers attacked by ants will add a desirable touch of humor. Do not be afraid to let the children laugh. The purpose of education is, among other things, to enlarge our capacity for happiness, and the happier you can make them, the more often you will "carry the election" with the children.

8. In the article on Agriculture, the plowing, sowing, etc., can be imitated, and the universal interest in animals cultivated. Play the horse at the plow, the operations of milking time, feeding the chickens and the stock, currying the horse.

9. In the article on Fisheries, the opportunities are obvious. The fisherman does a variety of interesting things in connection with catching and cleaning the fish.

Let the Children Work Out Exercises

Letting the children help plan the exercises will also add to their interest. In connection with a future lesson ask each child to think of an "act" that can be found in it. And reward the child who has thought of the best one by having the whole class perform it.

In the primary grades many such plays are performed to rhythm—either a simple melody played on the piano, if you have one, or a simple song sung without accompaniment. Too often the sense of rhythm begun in the lower is neglected or lost in the upper grades. Dr. L. W. Gulick says "Rhythm is a fundamental principle of life—perhaps the most fundamental. All our normal bodily functions work best in rhythm. In poetry, in music, in everything man knows that is highest and most beautiful, in all the supreme products of his imagination, there is still to be found some expression of this elemental principle."

Importance of Rhythm

Begin with a simple exercise like turning to the left, then to the right, with a "one-two" count. When the children have learned the movement, introduce a well-accented tune in two-part time. Next, take up a more difficult movement, such as stooping on "one," rising and stretching arms on "two." When the children have learned to really feel the swing of the music they will recognize the accent, and instinctively make these exercises rhythmic. Three-part time offers an opportunity for more elaborate exercises, and after that comes the more difficult four-part music.

Poetry for Our Little Poets

The Pied Piper

The Child's Love of Verse

LITTLE people take to verse as ducks take to water. Their first book is Mother Goose. They love the brisk action, droll fun and merry jingles, and find them easy to remember. Like the poet, the infant "lisps in numbers." His sleepy voice joins mother's in the lullaby. It is not uncommon to find children of three and four who have, without effort, memorized dozens of these little classics of the baby world. Many can repeat the long poem, "The Night Before Christmas." Every mother should have that gold mine of world-old Nursery rhymes and fables collected by Mr. Andrew Lang.

Many people think that, with babyhood, the child looses his love for verse. That is because new material is not supplied to him. Mother doesn't know what comes next. But the kindergarten and baby grade teachers know. Before he can read, the child learns, by rote, little verses and songs—one or two short selections are memorized every month. In the first grade children are introduced to Stevenson, Tennyson, Eugene Field and other famous writers.

At the end of this article we will give a list of "memory gems" by grades, culled from the literature courses of states and cities east and west. These serve for examples, but it must be remembered that the school list is limited by time connection with other studies, and that many fine things must necessarily be left for mother to teach. For instance, the schools must teach pure English. They have little time for dialect. This is why Riley and Burns do not appear on many lists. They do appear on the lists for home reading, and among the stories retold by the library story lady. Every mother should slowly make up her own list, adapted to the varying needs and interests of her own children. To do this she needs to have a broad understanding of the whole field of poetry as related to the child, and the sources of material.

Poets Who Write for Children

Most poets have written *about* children; very few *for* them. Of this latter class the best are Robert Louis Stevenson, James Whitcomb Riley, and Eugene Field. One of the few writers who, when grown up, remembered the serious thoughts, wistful dreams and wonder-world of his own childhood. Stevenson reflects the charm and purity of the child mind and heart in his Child's Garden of Verses. Riley's poetry is the spirit of joy, adventure and curiosity that bubbles up from the heart of the child world like spring water. A great part of its charm and value lies in its language that springs from the soil like a daisy. Children love it as they do squirrels and violets and visits to the country. Eugene Field is all tenderness, gentle fun and pathos. His "Little Boy Blue" is a pearl without a flaw.

Secret of the Poet's Charm

Some Valuable Collections

As nearly all poets have written a few poems that children understand and love—some but one—and some of the most approved are of unknown authorship, or, like Home, Sweet Home, were accidental, volumes of selections from many sources have been compiled especially for children. Among the best are: Poems Every Child Should Know, edited by Mary E. Burt; Songs Every Child Should Know, with the music, selected by Dolores Bacon; The Posy Ring and Golden Numbers, edited by Mrs. Kate Douglas Wiggin; and Story Telling Poems, by Francis Jenkins Olcott. These books are inexpensive, and can be ordered through any book store. A most admirable collection of verses for children of all ages is that by Emilie Kip Baker, issued by the American Book Company, in three small volumes. The price of these books, like that of most school books, is much lower than similar works sold only to the general public. The dainty illustrations, the introduction

Treasure Houses of Verse

to the collection by Franklin T. Baker, of the Teachers' College, Columbia University, and the indexes of first lines are among the valuable features of the work.

Longfellow and Tennyson are given to the children in the first and second years of school. Longfellow is known early through Hiawatha, but he grows in the child's affections year after year. His longer poems are nearly all stories; his shorter ones are simple, musical, easily understood and memorized. All his work is marked by everyday sympathies and plain rules for right living. The child of ten is stirred by Paul Revere's Ride. The Courtship of Miles Standish is usually read in connection with the account of the Puritans in the school histories.

The Delight in Longfellow

Poems That Tell Stories

Just as in the childhood of the race, people listened to folk ballads before they could read, so children are ready for the story poem long before they can read it for themselves. They like such ballads as Lord Ullin's Daughter, Tennyson's Lady Clare and Kipling's Ballad of the Clampherdown. Scott's Lochinvar, Browning's Pied Piper of Hamelin and Tennyson's Enoch Arden are simple. In many schools children read Longfellow's Evangeline, Lowell's Vision of Sir Launfal and Scott's Lady of the Lake in the seventh and eighth grades. In the same year the "story lady" is telling them the King Arthur legends, with long quotations from Tennyson. Boys especially are thrilled by Coleridge's Ancient Mariner. In volumes of collected verse are to be found James T. Field's The Captain's Daughter, Phoebe Cary's The Leak in the Dyke, T. B. Read's Sheridan's Ride, and other story poems.

Some Famous Story Poems

Tennyson has two poems for the little tots—the lullaby, Sweet and Low, and What Does Little Birdie Say? And his work is noted for its memory gems for all ages. Something there is for every grade, until the eighth-year boy recites the Charge of the Light Brigade and the girl is captured by the music of The Bugle Song. Next, to the children's bookshelf should be added Whittier, Burns and Scott. The best for children, in other poets, will be found in the volumes of selected verse, or can be copied from books in the nearest public library. If there is a scrap book in which things may be pasted or written, as they are found, no favorite bit of verse need ever be lost. And every family should have a copy of Bartlett's Familiar Quotations.

Poems That Take You Into the Fields

Next to the story, the child's keenest interest is in nature, and that includes human nature. The oldest lullabies refer to sheep and birds. The North Wind Doth Blow is a precious classic from Gammer Gurton. Tennyson's The Brook has been set to a lovely, rippling tune. Children love Bryant's Merry Robert of Lincoln. His Planting of the Apple Tree is used in the arbor day exercises. Burns' To a Mountain Daisy, and To a Field Mouse appeal to very small children. The Bluebird, by Emily Huntington Miller, is a joy, and Emily Dickinson's I'll Tell You How the Day Began, a delight. Celia Thaxter has written tenderly of the Sandpiper, Shelley of the

Nature Set to Music

Cloud and Skylark, Emerson of the Titmouse. William Blake's Tiger, Tiger, Burning Bright, should precede every child's visit to a menagerie. Browning's April in England makes the older boy and girl want to take the first steamer for Southampton, and many lines and stanzas in Sidney Lanier endear the Southland to the people of Dixie. Wordsworth, Shakespeare, Keats, Lowell, and other poets are full of memory gems on nature.

To Cultivate Love of Home

Poetry is one of the chief means of cultivating in children a love for home and an appreciation of the beauty of common life. The two finest poems in this class are Burns' Cotter's Saturday Night, and Longfellow's Hanging of the Crane. These are for the older boys and girls. The Children's Hour of Longfellow appeals to the little ones.

Poetry of Common Life

So do Whittier's Barefoot Boy and My Playmate; Miss Krout's Little Brown Hands; Trowbridge's Evening at the Farm; Kingsley's The Lost Doll; Wordsworth's We Are Seven, and Lucy; Hood's I Remember; Woodberry's Old Oaken Bucket. Longfellow's Stay at Home, My Heart, and Rest are memory gems. But, indeed, this list is endless. The choicest one of all is Home, Sweet Home.

Many of these poems of home are songs, or have been set to music. Only good things could live so long. These are songs of tender sentiment and lovely melody that have been kept alive, not only around the evening lamps, but by famous singers. Madame Patti's favorite song was Home, Sweet Home. Jenny Lind's was The Old Folks at Home. Another chose Annie Laurie. The chief song writing poets were Thomas Moore, with his Irish melodies, and Robert Burns, with his Scotch ballads, Auld Lang Syne, Bonnie Doon and others. Stephen C. Foster was the song writer for America. John Howard Payne, Mrs. Julia Ward Howe, William Douglas, Francis Scott Key, Lady Lindsay and others have written single songs of home, loved ones and country that should never be forgotten. They are to be found, with the music, in Songs Every Child Should Know. No child who loves these old songs will care for the vulgar words and cheap tunes of the popular "rag-time."

Poems that People Like

Poems Bearing Upon Conduct

All good poetry convinces the mind, moves the heart, opens the soul to the beautiful, and inspires to nobler living. But there are lines, stanzas and entire poems that have a definite influence on conduct. Longfellow's The Arrow and The Song, and The Psalm of Life are two of these. Leigh Hunt's Abou Ben Adhem is another. By the eighth year in school, children are reading Holmes' Chambered Nautilus, Milton on his Blindness, Eliot's Choir Invisible, The Quality of Mercy and Polonius' Advice, from Shakespeare. Many of the memory gems for children are distinctly moral, and hidden away in poems for grown-ups are fragments for little tots. "Spring's at the Morn" is a tiny song in Browning's Pippa Passes. "He prayeth best" is one verse in The Ancient Mariner.

Poems of Patriotism

Boys especially like poems of patriotism and heroic deeds. That

is why they like Paul Revere's Ride, Sheridan's Ride, Browning's Bringing the Good News from Ghent to Aix and Tennyson's Charge of the Light Brigade. Mrs. Heman's Landing of the Pilgrim Fathers is in every school list, so are Joaquin Miller's Columbus, Walt Whitman's O Captain, My Captain, and Holmes' Old Ironsides. Very few war or battle poems have been written, but war heroes are celebrated in verse. And much has been written on the pity and waste of war. After reading Burns' fiery Bannockburn, boys should read Bayard Taylor's The Song in Camp, and Tennyson's tender song in The Princess, Home They Brought Her Warrior Dead. Soldier's Rest, from Scott's Lady of the Lake, and Byron's The Night Before Waterloo are classics. The Battle Hymn of the Republic and America are sung in every school.

Songs of Heroic Deeds

There are many fine poems that cannot be classified. One of these is Tennyson's Sir Galahad. Burns' A Man's a Man for a' That and Edwin Markham's The Man with the Hoe are pleas for the worth of manhood. Francis S. Osgood has celebrated Labor. Kipling's Recessional and Cardinal Newman's Lead Kindly Light are great religious poems, unmarked by creed. Phillips Brooks' O Little Town of Bethlehem is another. And for pure beauty we have Poe's Bells and Tennyson's Bugle Song.

Humor That is Good for the Soul

Laughter is a good part of the poetry of life, and every little bit of good, humorous verse should be treasured. It is the wit, the good-tempered fun and unbridled fancy of Mother Goose that makes her immortal. To the child of seven or seventy there is something irresistibly funny in the idea of a cow jumping over the moon. No wonder the little dog laughed. Edward Lear's Owl and Pussy Cat is more artificial, but it is a great favorite with the children. Riley has a natural, rollicking humor, a laugh in every line, with, sometimes, a tear behind it. Now and then Eugene Field writes a good joke, as in "Just 'fore Christmas I'm as good as I can be." Burns' Hallowe'en is funny, just because it is so gruesome. The Walrus and the Carpenter, The Jabberwock, and the Lobster Quadrille of Lewis Carroll are gems. The Mountain and the Squirrel of Emerson is as bright and snappy of wit as the furry speaker. Holmes' Wonderful One-Hoss Shay is a classic, and in many of this New England poet's verses one catches a twinkle of the eye. Stevenson's fun is grave and gentle, as is his sense of injury in having to get up by night in winter, and go to bed by day in summer; and in his Whole Duty of Children:

The Tonic of Laughter

"A child should always say what's
true,
And speak when he is spoken to,
And be mannerly at table,
At least as far as he is able."

Poems for Children Arranged by Grades

Culled from the prescribed lists of a number of state and city schools of the United States and Canada.

First Year.—A Happy Thought, The Whole Duty of Children, and The Swing—Stevenson. What Does Little Birdie Say—Tennyson. Sleep, Baby Sleep—Lullaby from the Ger-

man. Wynken, Blynken and Nod—Eugene Field. Little Drops of Water—Anon. Twinkle, Twinkle, Little Star—Jane Taylor. The Merry Heart—Shakespeare. How Doth the Little Busy Bee—Isaac Watts. Selections from Mother Goose.

Second Year.—Time to Rise, The Rain and I Have a Little Shadow—Stevenson. Little Boy Blue—Field. Little Brown Hands—Mary H. Krout. The Tax Gatherer—John B. Tabb. "Spring's at the Morn"—Browning. Father, We Thank Thee—Emerson. "He Prayeth Best"—Coleridge, in The Ancient Mariner. Seven Times One—Ingelow. Hiawatha's Childhood, Heigh-ho, Babyhood—Riley.

Third Year.—Home, Sweet Home—Payne. The Children's Hour, and The Arrow and the Song—Longfellow. Sweet and Low—Tennyson. The Brown Thrush—Lucy Larcom. The Pleasant Land of Counterpane—Stevenson. Robert of Lincoln—Bryant. Speak Gently—Anon. Under the Greenwood Tree—Shakespeare. "Be Good Dear Child" and The Lost Doll—Kingsley. Little Brown Seed—Anon. The Day—Emily Dickinson. Casabianca—Mrs. Hemans. Thanksgiving Day—Lydia Maria Childe.

Fourth Year.—The Mountain and the Squirrel—Emerson. The Brook—Tennyson. The Village Blacksmith and Paul Revere's Ride—Longfellow. To the Fringed Gentian—Bryant. To a Mountain Daisy—Burns. The Sandpiper—Celia Thaxter. The Bluebird—Emily Huntington Miller. September—Helen Hunt Jackson. The Leak in the Dyke—Phoebe Cary. The Barefoot Boy—Whittier. Jack Frost—Gould. Landing of the Pilgrim Fathers—Hemans. The Captain's Daughter—James T. Fields. Dorothy Q—Holmes.

Fifth Year.—Excelsior, The Day Is Done, and The Ladder of St. Augustine—Longfellow. Woodman Spare that Tree—Morris. Barbara Fritchie, and My Playmate—Whittier. Homes of England—Mrs. Hemans. To a Field Mouse and Bonnie Doon—Burns. Abou Ben Adhem—Leigh Hunt. Before the Rain—Aldrich. The Song in Camp—Bayard Taylor. The Black Regiment—George H. Baker. Ring Out Wild Bells and "The Time Draws Near the Birth of Christ" (four stanzas in In Memoriam)—Tennyson. Lord Ullin's Daughter—Campbell.

Sixth Year.—The Builders, The Emperor's Bird's Nest and King Robert of Sicily—Longfellow. To a Waterfowl—Bryant. The Blue and the Gray—Finch. Sheridan's Ride—T. B. Read. Old Ironsides—Holmes. A Man's a Man for a' That—Burns. Sir Galahad, and "Home They Brought Her Warrior Dead" (song in The Princess)—Tennyson. June (In the Vision of Sir Launfal)—Lowell. How They Brought the Good News from Ghent to Aix—Browning. To a Skylark—Shelley. Lucy—Wordsworth. The One-Hoss Shay—Holmes.

Seventh Year.—Herve Riel—Browning. Horatius at the Bridge—Macaulay. Concord Hymn—Emerson. The Bugle Song, and The Brook—Tennyson. Bannockburn—Burns. "Soldier's Rest" (in The Lady of the Lake) and "Breathes There a Man" (in Marmion)—Scott. Daffodils—Wordsworth. The Bells—Poe. The Charge of the Light Brigade—Tennyson. O, Captain, My Captain—Whitman. Selections from "Snow Bound"—Whittier. The

Last Leaf—Holmes.

Eighth Year.—Columbus — Joaquin Miller. The Chambered Nautilus—Holmes. On His Blindness—Milton. The Recessional—Kipling. Polonius' Advice (Hamlet), The Quality of Mercy (Merchant of Venice)—Shakespeare. Waterloo—Byron. Sir Launfal and The Leper—Lowell. The Ship of State—Longfellow. The Cotter's Saturday Night—Burns. My Lost Youth—Longfellow. Lead Kindly Light—Newman. April in England—Browning. From Casa Guida Windows—Mrs. Browning. To a Nightingale—Keats. Serene I Fold My Hands and Wait—John Burroughs. The Choir Invisible—George Eliot. The Problem—Emerson.

About the Fairies

Pray, where are the little bluebells gone,
That lately bloomed in the wood?
Why, the little fairies have taken each one,
And put it on for a hood.

And where are the pretty grass-stalks gone,
That waved in the summer breeze?
Oh, the fairies have taken them every one
To plant in their gardens, like trees.

And where are the great big blue-bottles gone,
That buzzed in their busy pride?
Oh, the fairies have caught them every one,
And have broken them in, to ride.

And they've taken the glow-worms to light their halls,
And the crickets to sing them a song,
And the great red rose-leaves to paper their walls,
And they're feasting the whole night long.

But when spring comes back with its mild, soft ray,
And the ripple of gentle rain,
The fairies bring back what they've taken away,
And give it us all again.

ANONYMOUS

E can now travel in any land, in any season, or among any tribe or race, snugly ensconced, with a few illustrated books, by our own fireplace. The limit and range of what pictures can do is steadily increasing. One can know many of the wonders of the vast new world of the microscope and telescope without ever looking through an eye glass. It would be a curious question for the imaginative mind to work out how far an education based upon a wise selection and proper gradation of pictures might today be carried without the ability to read. If all written or printed records of the present time should be lost it is surprising to reflect how much of what makes life interesting could be reproduced by pictures alone. Seeing is not only believing, but understanding, and a single judicious picture or blackboard drawing often tells in a moment what it would take paragraphs to describe, if indeed words could ever give it at all

G. Stanley Hall

Nothing makes a book so interesting as for mother to get interested in it too. It is this interest in books which should be guarded and encouraged by careful selection of the best things in literature, but which is often lost as the child grows older.

The Children's Home Library

"WHAT books should I buy for the children?"

That question is asked anxiously every day, by countless fathers and mothers. Kindergartners, teachers, librarians and city and state school superintendents have spent years in seeking the answer. Upon a few things they are all agreed. The books read in earliest childhood have a deep and lasting influence upon the character and should be as carefully chosen as the food a child eats. Second, the true, the good, and the beautiful can be made as interesting to the child as the weak and vicious.

Here's an Alice in Wonderland of a different sort than the one in the story—a little girl in the wonderland of books. If you have ever journeyed far into that wonderland, you know how truly thrilling it can be, what strange, interesting, jolly people you meet there and what pleasant surprises there are on every side.

The Best Books Not Expensive

It is impossible to give here a list of all the good books for children, for there are young people's reading rooms in the big city libraries, that have ten thousand titles on the shelves. But, in buying even a few, one will learn of others of the same character. City book stores and publishers will send catalogues on request by mail, and submit lists. The larger text-book publishers should not be overlooked, for many of the very best books for young children are the supplementary readers used in schools. But no school has them all, and they are not on sale in the book and department stores. From thirty to fifty cents brings many a careful selection of world-famous short stories, or reprint of a longer classic, within reach of people of small means. And they are better printed, illustrated and bound than most of the new

"juveniles" that are offered for sale.

Very little folks must be amused in ways that will awaken the mind and stimulate self-activity. They have eager curiosity about this "brave new world." They love color, movement, adventure, fun. Mother Goose is baby's first book. It should be boldly illustrated with pictures of few details, and in the primary colors. A three-year-old child will soon learn the jingling rhymes and the pictures that go with them. Then come Aesop's Fables, the class fairy stories such as Red Riding Hood and The Three Bears, and the linen picture books of animals, birds, flowers, children, trains, ships and housekeeping.

Avoid the Cheap and Crude in Illustrations

Care should be taken to get the best pictures. All of these baby books are issued in many editions, most of them crude and in violent colors. And many mothers do not know that famous artists and clever minor ones have given their best talents to illustrating the classics of childhood. Walter Crane has made pictures for "Baby's Own Aesop" and for "The Best Nursery Tales and Rhymes." Kate Greenaway has given us her quaint alphabet book "A —Apple Pie," "The Pied Piper" and a number of other books. Helen Stratton has illustrated "Grimm's

Artists Who Draw for Children

If you have not read Oliver Goldsmith's "Vicar of Wakefield" you should do so at once. Here is a scene from it. The two pretty daughters of the old Vicar liked fine clothes as well as any girls, but their father thought their new gowns were too full in the skirt for modest, minister's daughters. To prove to him that they were not vain, they cut down the skirts and made clothes for their younger brothers out of the extra cloth. Here you see them cutting up the stylish, full skirts of which they were so proud and fitting a waistcoat made of one of them on their youngest brother. Don't you think they look a little sorrowful?

Fairy Tales"; Sir John Tenniel and Arthur Rackham, "Alice in Wonderland." "La Fontaine's Fables" inspired the best efforts of Boutet de Monvel. L. Leslie Brooke draws wonderful talking animals; Reginald Birch and Jessie Willcox Smith, graphic reproductions from old and modern masters are used to illustrate legend and biography. Bound volumes of the best magazines will make children familiar with the really good illustrators of the day. If brought up on such charming,

Shakespeare at Court

Here is Shakespeare as a young man, reciting a selection from his plays before Queen Elizabeth and her court. See how wrapped up in his subject he seems, forgetful of his surroundings. And notice the expression on the faces of his hearers—how moved they are, and how astonished at the things this wonderful young man is saying.

charming children; Howard Pyle the heroes of old romance. The best comic artists are Peter Newell, Gelett Burgess and Palmer Cox. Burgess' "Goops," Cox's "Brownies," Grover's "Sunbonnet Babies," Newell's "Topsys and Turvys" and Rose O'Neill's "Kewpies" are a delight to little folks and big. For older children nothing can surpass the delight of the "really, truly" Indians and cowboys of Frederick Remington, and the delicate nature drawings of A. B. Frost. Photo-delicate, truthful pictures, children will be indifferent to the vulgar scrawls of the Sunday supplement.

Little folks like "Peter Rabbit," "The Pinafore Palace" and "Posy Ring," by Kate Douglas Wiggin; "The Nursery Rhyme Book," of Andrew Lang; "The Hiawatha Primer," by Florence Holbrook. The first book of poetry is Stevenson's "Child's Garden of Verses," illustrated by Jessie Willcox Smith.

Many people are of the opinion that a child should not be given

The Canterbury

Before Shakespeare wrote his great dramas, Chaucer gave us valuable pictures of the manners and customs of the times when he lived, in his "Canterbury Tales." The Tales are a series of stories told by a big party of people journeying together on a pilgrimage to the shrine of a saint. They are written in queer, old-fashioned English that is a little hard for us to understand today. You will read

linen books. They think the smallest child should be taught to be careful of books, to handle them only with clean hands, and never to mark, tear or cut them.

The First Four Years in School

It should be kept in mind that, until the fourth or fifth year in school, children's vocabularies are too limited for them to read many books readily. These are the years that the text-book publishers make special effort to supply a great variety of educative and interesting reading matter, in type suitable to little folks' eyes. The character of these books follows closely along the lines of the school courses, so parents should know just what interests are being awakened in a child as he passes through the grades.

In the very first year in school the child begins to get a background of biography and history and to observe nature with interest and intelligence. He hears about Indian and Puritan life; about Columbus, Washington and Lincoln; about Thanksgiving and Memorial Day; about animals and plants. Some day he will come home bursting with the news that "Eskimos live in snow houses! Did you know that, mama?" He is ready, then, for Mrs. Peary's story of her own "Snow Baby" and Lieut. Schwatka's "Children of the Cold."

Enlarging the Child's World

He is soon ready for Andrew's "Seven Little Sisters" and "Children of Our Own and Other Lands" in this book; for stories of Hiawatha's childhood, for Kipling's "Just So" stories and the "Jungle Book"; for Uncle Remus; Scudder's Stories from the Arabian Nights; Brown's "Book of Saints and Friendly Beasts"; Baldwin's "Fifty Famous Stories."

Before a child is ten years old he should know all of the best fairy

Pilgrims

some of it when you study English literature in High School. These two pictures show us the pilgrims as they are riding along, laughing at each other's jokes, listening to stories and altogether having a very jolly time.

tales of Andersen, Grimm, Lang, Jacob's Celtic collections, Mabie's and Dasent's Norse tales, the Arabian Nights and Gulliver's Travels. The stories of Ulysses, King Arthur and other legendary heroes have been written by such distinguished people as William Morris, Howard Pyle, Hamilton Mabie and Sidney Lanier, and by such tried and true text-book authors as Baldwin. Every sort of heroes—of invention, exploration and discovery have been put into brief form and simple language. Hiawatha, Miles Standish and many short poems of Longfellow, Whittier and Tennyson can be read to children under ten. And in their libraries should be some good volume of selected verse such as "Poems Every Child Should Know," or "The Book of Famous Verse," by Miss Repplier.

Children's Heroes in Poetry

The Fascination of Fiction

Children *will* have stories—pure fiction. "Robinson Crusoe" is the boy's own book. That interest should be followed up by Dan Beard's books on things a boy can do. Girls adore Miss Alcott's wholesome story of home life, "Little Women." That can be followed by Lin Beard's books for girls, and little cook books. If you catch a boy reading a "yellow back" or cheap blood-and-thunder story give him Stevenson's "Treasure Island." That is as exciting as any dime novel, and it is such good literature that he will have a distaste for the cheap and vulgar. Read Stevenson's "Kidnapped" to him, Cooper's Indian tales and Howard Pyle's "Merry Adventure of Robin Hood."

Famous Books for Young People

Cooper will lead naturally to Thompson Seton's animal books, Kipling, Uncle Remus, Olive Thorne Miller's bird books, and all the delightful out of doors. For pure romance children of ten will listen to Miss Mulock's "Little Lame Prince," Kingsley's "Water Babies," Carroll's "Alice in Wonderland,"

Mrs. Wiggin's "Bird's Christmas Carol," Ouida's "Dog of Flanders," Eggleston's "Hoosier School Boy." Among the most wholesome of modern stories are "Mrs. O'Callaghan's Boys" and Mrs. Wiggin's "Rebecca of Sunnybrook Farm."

For Children from Ten to Twelve

Some children are more mature in mind than others. But before twelve most children will be doing a good deal of independent reading. *St. Nicholas* or *The Youth's Companion* should be subscribed for. The child should have, and know how to use, an unabridged dictionary and an encyclopedia adapted to his interests and needs. No one can know everything. More important is the ability to find what one wants to know, and teaching the use of reference works is now a part of the school curriculum.

At the Adolescent Period

At the age of ten or twelve, boys and girls begin to differ widely in their choice of reading. The boy's interests are adventurous and industrial, the girl's romantic and domestic. Boys are hero-worshippers. From Ulysses and King Arthur they should be led to brief lives of Columbus, Washington, Franklin, Paul Jones, Daniel Boone, Fulton. They should read Tappan's "American Hero Stories" and Roosevelt's "Heroes of American History." Girls will read Miss Alcott, Mrs. Burnett and Mrs. Wiggin.

As a boy passes through a dime novel stage, so a girl, a little later, usually has a sentimental period of reading silly romances. Then give her "Romeo and Juliet." Read it with her; read "Jane Eyre" and other really great love stories. "Evangeline" and "Enoch Arden" are examples.

How the School Introduces Children to Great Writers

The best authors are usually the simplest. It took Whitman to write

Milton, the Boy

In this picture you see the poet Milton as a boy of twelve. Such a beautiful, serious young face! As though he were already dreaming of the lofty poems he would write when he became a man!

"O Captain! My Captain"; Browning, "The Pied Piper"; Barrie, "Peter and Wendy"; Hawthorne, "The Snow Image." By the end of the seventh year in school, or at thirteen years of age, children have learned something of fully fifty great writers. Careful selections have been made for them from all the American and English poets and story-tellers, essayists, books of travel, biography and the natural sciences. Before sixteen, literary taste has been formed, and an incredible amount of reading done. It is important, then, that children should have the best.

John Milton was a serious Puritan poet who lived in the time of Cromwell's Revolution in England. His "Paradise Lost" is the most majestic composition in the English language. He has also written some beautiful shorter poems. L'Allegro for example, which is about

"Quips, and cranks, and wanton wiles,
Nods, and becks, and wreathed smiles"

is one of them.

When Milton was old he went blind and all his work had to be dictated to one of his three daughters.

The Upper Grades and High School

In the upper grammar grades children get bits of Hawthorne, Burroughs, Dickens, Scott, Lamb and many others. At home these new interests should be fed. Most fourteen-year-old boys and girls will enjoy Hawthorne's "House of Seven Gables," Eliot's "Silas Marner," Dickens' "Chimes," "Christmas Carol" and "Cricket on the Hearth." They will read Scott's "Tales of a Grandfather," Bennett's "Master Skylark," Kipling's "Captains Courageous," Hughes' "Tom Brown's Schooldays," Barrie's "Peter and Wendy" and "A Window in Thrums," Cooper's "Spy" and "Last of the Mohicans," Van Dyke's "Story of the Other Wise Man," Mark Twain's "Tom Sawyer" and such novels of times and manners as "The Vicar of Wakefield" and

"Uncle Tom's Cabin."

A good introduction to Shakespeare is through "Lamb's Tales." Historical romances such as "Ben Hur," "The Last Days of Pompeii" and "A Tale of Two Cities" should lead to the boy's own historian, Francis Parkman. In nature books Kipling, Thompson Seton, Long, Sharp and Mrs. Miller should lead to Burroughs, John Muir and Thoreau.

Good Books for Little Citizens

There are certain books that every American boy and girl should read, to learn what a privilege it is to be a citizen of the United States, and living in this great age of discovery, invention and freedom. These are Hale's "Man Without a Country," Myra Kelly's "Little Citizens" and "Little Aliens," Booker T. Washington's "Up From Slavery," Helen Keller's "Story of My Life," Mary Antin's "Promised Land," Jacob Riis' "The Making of an American" and Jane Addams' tender social studies of the lives of the poor in great cities.

Parents will have to take some pains to discover new books that are worth while. The advertisements of publishers and advice of friends are not reliable guides. A literary review, such as *Review of Reviews, Current Opinion, The Nation, The Dial,* or daily papers that give special expert attention to books, should be taken. There always are a few living writers for children from whom a new book is an event; and now and then an unknown writer appears with a book that the world is unwilling to lose. The best books, as a rule, make their way slowly. A "best seller" is apt to disappear quickly. A new book, one that is unknown and that has not been approved by educators, should be read by the parent or teacher before it is given to a child. Remember, all old books are new to children.

Portia

Perhaps you have read Portia's speech in "The Merchant of Venice"—how she defended her husband's friend against the revengeful Shylock. Here is one artist's idea of her (Shakespeare tells us she was fair-haired and blue-eyed). She is sweet and serious, thoughtful and noble; her fine character is revealed in her face.

How to Give a Pageant

Inspiring Feature of School and Community Life

The Minuet of Our Forefathers

This picture shows a pageant given at Bennington, Vermont, in which the young people danced the minuet on the green just as they used to do in Colonial days. Notice how the gallant young gentlemen make an archway with their swords above the gracefully moving figures of the ladies.

WHEN we see what children can do in various forms of dramatization in the ordinary life of the school, it becomes evident that all that is needed in any community to introduce the delight and inspiration of pageantry is the will to do it. Never before have there been such opportunities to study the principles of pageantry. The movies are a continual pageant—not always artistic, but full of good suggestions as to acting and playing a whole story by movement and gesture. If the wide ambition for the stage were directed into local pageantry, it would add greatly to the joy and profit of community life and save many disappointments.

Pageantry and the Movies

Festivals and holidays offer some of the best opportunities for either indoor or outdoor pageantry—May Day, Harvest Home, Hallowe'en, Christmas, Washington's Birthday, Fourth of July, Thanksgiving.

Nearly every town has one or

more heroes in its history, whose story would furnish the foundation for a pageant; and there are Indian legends in the history of nearly every community if you will go back far enough in local records or in the memories of old residents. Our story of the Indians in the History series is full of suggestion for similar pageantry.

Rich Material Near at Hand

The service of the local librarian will be invaluable. The librarian not only knows the material in the public library—local histories and documents—but will be helpful in the location of other public records, and nearly every town has one or more old settlers who know the traditions and who have probably collected relics that will be of service.

The educational value of a pageant—and its educational value is great—depends, of course, upon historical accuracy. Accurate information is to be found in these town records, acts of legislation, court decisions, newspapers of the time dealt with, county histories, etc.

The pageant is pre-eminently fitted for welcoming home a hero, opening a fair, celebrating a victory, inaugurating a public enterprise, observing an anniversary. Uncle Sam's birthday is an especially appropriate season for Americanizing the foreign-born element by teaching the meaning of liberty, equality, fraternity, through a reproduction of the struggles of those who fought for the faith. Any city in the United States may give a patriotic pageant if a local area at least two hundred feet square can be found adjoining a lake or ample river. Take a few of the most salient events in American history—the coming of Columbus, arrival of the Pilgrims, signing of the Declaration; introduce one or two local scenes bearing on national affairs; find an Indian legend connected with the locality; call out a detail from the Grand Army; enlist representatives from various nationalities which colonize in every city for a suite of folk dances; give a sumptuous court scene in one of the countries from which America was peopled, introducing Henry the Fourth of France, Queen Elizabeth or George III; as a finale let Uncle Sam review the players and The Goddess of Liberty lead the entire gathering in singing the "Star Spangled Banner."

Good Subjects for Pageants

First Steps in Preparing a Pageant

As soon as the project of giving a pageant is decided, the best thing to do is to call a joint mass-meeting and announce that some prominent pageant author or director will speak, to point out the possibilities of that particular locality. From this assembly, committees may be chosen, for attendance of those present indicates an active interest in the project. Several committees are necessary if the pageant is a large one—an executive committee, a committee of finance, of publicity, (including the programs) of costumes, of music and dancing.

The Writing of the Play

In every community there are people who, while they are not poets, have imagination which can be applied to shaping an episode in the life of the community into a pageant. The writing of the pageant may be done by one person or several collaborating, or a committee working under the direction of a

chairman; but the chairman must have proved himself or herself capable of directing, and should make a careful study of pageantry.

Let the plot be simple, with as few scenes and with as little dialogue as possible. Remember that the actors in a pageant are to be seen rather than heard. There is little opportunity for effective dialogue.

The Site, the Scenery, and the Stage

In selecting a site for a pageant, its adaptation to the character of the scene in the pageant should be carefully considered. If the background is a far-off vista, one of the entrances should be up this vista. A steep hill or a rocky cliff is the ideal background for action of a pictorial character. Rocks and shrubbery in the middle ground should be related, both to the action and to the grouping. All the fore stage should be made level and cleared of things that will shut out the view. Dancing is an important feature of pageantry, and you cannot dance on rough ground. Do not make the mistake—as many do—of building a wooden platform in the foreground. The element of the picturesque is fundamental in pageantry; and a platform is not picturesque. The green fields, the rocks, the woods, are the stage, and there should be as little suggestion of the indoor theater as possible.

The Selection of a Site

Pageants have been given in a clearing in the deep woods, as at Peterboro, N. H.; on the fair grounds, as at Oxford, Mass.; on the military parade ground, as at St. Augustine; on the college campus, as at Charlottesville, Va.; on the town common, as at Warwick, Mass. An open field bordered by woods is desirable. Hemlock or cedar trees may be effectively set up by way of landscape gardening.

Unwise Use of the Flag

And here is a "don't" for indoor pageantry which needs emphasizing. Don't hang a large flag in the center of the background. This is misdirected patriotism. The red, white, and blue of the flag are too belligerent, too conspicuous, to blend with anything else. Unless the story requires a flag, confine this form of decoration to the walls of the room.

Put your scenes as close to the audience as possible and let the space in which the performance takes place be approximately that of an assembly hall at school. Use your supernumeraries as spectators who form an enclosing wall on three sides. Such properties as you have to have—tables, chairs, etc.—may be brought on and carried off again at the end of each scene.

The Costumes of the Pageant

Standard Types of Dress

In costuming the pageant there are certain standard types of dress for each period. The Norsemen, Indians, explorers, Puritans, Quakers, Cavaliers, Revolutionary patriots, 1812 soldiers, frontiersmen, Jesuits, Civil War veterans—all easily identified. Good books about costumes, are "Two Centuries of Costume in America," by Alice Morse Earle; "Historic Dress in America," by Elizabeth McLellan; "Costumes for Dramatic Festivals," by C. D. Mackay; "Chats on Costumes," by G. N. Read; "Dress Design," by Talbot Hughes. Local artists should advise on the color schemes which may be very beauti-

ful either by striking contrasts or subtle harmonies. Delicate shadings of browns, yellows, grays, and greens for fairies are charming. Groups of industrious and willing townswomen

velvets you do not require either silk or velvet. For velvets and other heavy cloths use cambric or canton flannel. The cheapest grades of cheese cloth are soft, and hang well.

The Pageant of the Year

A beautiful Pageant of the Year was given by the Brookline, Massachusetts, High School. The picture shows the members of the cast on the stage of the Assembly Room. In the center of the group, at the back, is Father Time. You can tell what month each girl represented by the sign of the Zodiac. The first on your left as you look at the picture is May, represented by the sign of the Twins. Next comes June, represented by the sign of the Cancer. Then in order, the Lion, July (represented by his tail); the Virgin, August; the Balance, September; the Scorpion, October; the Archer (two arrows), November; the Goat, December; the Water Bearer (represented by the wave-like lines), January; Pisces (two fish joined together), February; the Ram (represented by his face and horns), March; the Bull, April.

should gather for social sewing bees. Home-made costumes are best. Elaborate suits may be hired for two dollars per day.

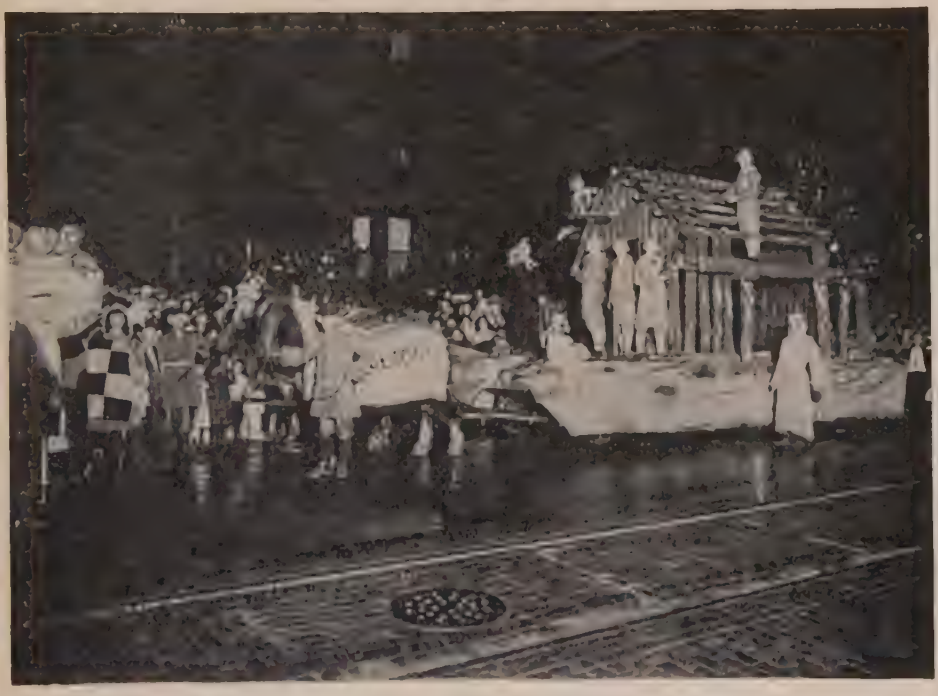
For costumes of different periods consult also reproductions of paintings, statuary and pictures of historic relics relating to the period to be shown in the pageant. The penny reproductions of paintings are of great value. Histories to be found in the local library are full of valuable illustrations, such as those in our Stories of History.

Rich Effects With Cheap Materials

To get the effect of rich silks and

For lace use ordinary netting. For costumes of stiff material use burlap. Stencil or paint this burlap to imitate brocades and embroideries. Chintzes are useful for 18th Century dresses; canton crepe for soft and clinging gowns. For armor use burlap. Coarse knitted or crocheted goods serve excellently for chain mail. A derby hat with the rim cut off can easily be converted into a knight's helmet of the simpler sort. Make the more picturesque shapes of cardboard. Paint

Pageants as Teachers of History



Float in Historic Pageant, Showing Building of First Church in 1701

Raising the First Flag on an American School House
(From a pageant given at Colerain, Massachusetts.)

The Pageant o

This pageant was given at Richmond, Virginia. Compare these figures with those in Sargent's Frieze of t young women have reproduced the artist's great work. In the center is Moses with the tablets of the la (seated), Hosea, Amos, Nahum, Ezekiel, Daniel (with the scroll), Elijah, Joshua (drawing his sword), Jeremia

armor, mail and helmet with aluminum powder mixed with glue. The glue must be thin and hot. The Indian's buckskin suit can be made with either wool or cotton "ratteen," and the bead work and other trimmings painted on with oil colors.

In all costumes avoid unnecessary detail. Remember that these details are lost on a distant audience.

Properties of all kinds, except furniture, can be made in the carpenter shop or in the manual training department—spears, swords, bows and arrows, shields, guns. Paint with gold, silver or aluminum. Borrow historic relics, such as spinning wheels and musical instruments, from people in the community.

The Color Question

A word more on the color question. In deciding upon colors and color combinations, remember that these are to be seen in the open, under sunlight and with masses of green all around. Ruby red, red orange, are good colors—and so on through the scale. Never use black. For dark colors use blue or dark brown. Pure white is also very effective from a pageantry standpoint,

h e P r o p h e t s

Prophets, a picture of which you no doubt have in your High School room. You will see how remarkably the The first figure on the extreme left, as you look at the picture, is Zephaniah. Next in order are Joel, Obadiah onah, Isaiah (with both arms raised), Habakkuk, Micah (hand at brow), Malachi, Zechariah.

as you can see from watching the players in a tennis game.

In Indian costumes use warm brown. For head dresses, wine red; and remember that the Indian's sense of color was barbaric and he liked color contrasts of vivid hues for "full dress" occasions.

The Indians and the Spirits

For mountain spirits that will "look the part" use deep blues or purples and a few greys. The "styles" in wood nymphs run to greens and browns, with touches of autumn colors. In dressing flower spirits be careful; do not make them too bright or you will interfere with your general color plan. In the use of two or more tints in the same costume let these tints gradually fade into one another—no sharp contrasts.

In the costumes of the men of the 17th Century the distinctive colors were brown and silver. The women dressed in grey and neutral colors, with an occasional sharp contrast in apron or petticoat.

Music and Dancing

Music is an important part of community expression because it is

The Mother Goose Procession

This is a Mother Goose procession in a pageant given at Greensboro, N. C. Do you notice in the procession the figure of the little man who went to London to get him a wife? You remember, he was a bachelor and lived by himself, but the rats and mice led him such a life that he resolved on matrimony, because a wife is supposed to know how to get rid of rats and mice, as well as everything else about housekeeping. He found the London streets so broad and the lanes so narrow, that he brought his wife home in a wheelbarrow.

the most readily appreciated, without training or education, of all the fine arts. Orchestral music should be, in part at least, composed for the occasion by working out special motifs, as the forest motif in the Redwood pageants of California; the mountain motif at Thetford, Vt.; the life-saver motif at Cape Cod. The orchestra should be screened by shrubbery or placed in a sunken pit. There must be a leader of vocal music, as old favorite songs and hymns are always happily introduced and may be sung by the entire company.

Character of the Music

The lyric side of pageantry appears in the dance. The language of action is most readily understood by all classes. The rhythmic dance makes an elemental appeal, developing elasticity of body and spontaneity of movement. In the pageant are the folk dances, collective social dances, descriptive dances, symbolic dances and solo dances. The folk dances include Italian Tarantella, Portuguese chamarita, Irish reel, Scotch fling, Spanish fandango, Polish mazurka and so on. Books on dancing are "The Folk Dances for Schools," by Elizabeth Burchenal; "The Folk Dance Book," by C. Ward Crampton; "Dramatic Games and Dances," by Caroline Crawford; "The Festival Book," by Jeanette E. C. Lincoln; "Play Songs," by Alys E. Bentley. The interludes of the pageant are often used for symbolic dancing to bridge over the different episodes.

Place of the Rhythmic Dance

Getting the People Out

Publicity consists of newspaper

The Old Woman Who Lived in a Shoe

Greek Dancers in Pageant of the Tree, Boston

"The language of action is most readily understood by all classes. The rhythmic dance makes an elemental appeal, developing elasticity of body and spontaneity of movement."

advertising, posters, and post cards. Descriptive circulars should be sent out, about a month before the production, to prominent citizens within the automobile radius. Special artistic stationery should be designed for the occasion. Watch fobs, buttons, banners, are sometimes used. An old stage coach full of colonial dames is good advertising on the day of the "show." Uncle Sam striding through the streets has been tried successfully.

Advertising the Pageant

The Day of Presentation

The day of presentation is a busy one for the master. He must be at a point of vantage. A conning tower is sometimes erected from which to direct the performance. Several rehearsals should be held, and one, at least, on the pageant grounds so that the players may become familiar with the environment. A decrepit piano may be kept under a temporary shed. Some pageants have been whipped together in two weeks. Two months is short enough time. Clock-work precision comes from repeated rehearsals.

Necessity of Rehearsals

A Word to the Players

Just a word about the acting. The actors are, of course, amateurs, and it is a very common fault of amateur actors to be interested only in their parts. You can see that each is waiting until his cue comes and is not particularly interested in what the others are saying. In real life this is bad manners. On the stage it is bad acting, but particularly in a pageant, because in the pageant there are no "star" parts. The size of the pageant stage makes group acting a necessity.

Shades of facial expression and

slight gestures are lost on a distant audience.

In reproducing the life of any period, careful study should be made of details of the manners of the time. Good historic novels, to which the librarian can direct you, will give you what you want. Taking snuff, for example, sounds like a very simple operation—but not so. Among the aristocrats of colonial times taking a pinch of snuff was almost as elaborate as a state ceremonial. It was always offered in the right hand. The lid was struck open by a graceful upward movement of the fingers. The gentleman extending and the gentleman receiving the courtesy bowed, the latter taking a small pinch between his thumb and finger. The owner of the snuff box then transferred it to his left hand, took a pinch himself, and again they bowed. The lid was then snapped to, the snuff inhaled by both simultaneously, with grace and delicacy of movement. Then each flicked his shirt frills and waistcoat with his lace handkerchief—and the thing was done! A great deal of ceremony, but therein lies the beauty.

Only a Pinch of Snuff But—!

Greek Pageant Given at Nashville, Tenn.

Home Training in the Mother Tongue

You see they are all alike—children all over the world. It's easy to talk—their little tongues are going most of the time—but when it comes to writing—particularly when it comes to writing "compositions" and things like that, it's different.

These are little French children in a French school, and the picture, which was painted by Jean Geoffroy, as you already know from your picture study in school, is called "Composition Day."

"SHE'S little, but she's sweet, and absolutely without guile. I think we ought to have her."

"Is 'guile' the same as guilt?" inquired Emma Jane Perkins.

"Yes," the president answered, "exactly the same, except one is written and the other spoken language. Written language is for poems and graduations and occasions like this—kind of like a best Sunday-go-to-meeting dress that you wouldn't like to go blueberrying in, for fear of getting it spotted."

So spoke Rebecca, one of the delightful children written about by Kate Douglas Wiggin.

"Her pencil moved as easily as her tongue, and no more striking simile could possibly be used. Her handwriting was not Spencerian; she had neither time, nor patience, it is to be feared, for copy book methods, and her unformed characters were frequently the

Learning to Write by Writing

despair of her teachers, but write she could, write she would, write she must, and did, in season and out; from the time she made pot hooks at six, till now, writing was the easiest of all possible tasks—."

In these quotations we have the leading ideas set forth in hundreds of books about the use of English, and, if properly interpreted, more sound sense than some of the books exhibit.

Five Principles of Training in English

Broadly speaking, these ideas may be summarized thus:

1. The use of English involves speaking and writing.

2. Ordinarily, written English is more formal than spoken English.

3. Speaking and writing are easy when one has a motive or purpose in expressing his thoughts.

4. Ease in writing comes by use and habit.

5. Attention to penmanship is of secondary importance.

The child learns to speak English by imitation. He imitates what he hears in the home, and at play with other children. If he hears a large vocabulary, accurate pronunciation and enunciation, and correct grammatical construction, his speech reflects all these good qualities as a *habit*. If he hears their opposites he gradually builds up habits that may never be broken. Stilted language is far from being desirable in children or anybody else, but there is no need of avoiding it by going to the opposite extreme of slovenliness; children can remain child-like and form good habits of speech. The formation of good habits cannot be begun too early, and there is small danger of too much insistence on reasonable standards of English speech. Until the child goes to school the home is responsible for what he learns. The responsibility is largely one of giving him an opportunity to imitate good models.

Habit Governed by Example

Home training can be more useful than most school training; first, because in the home the training can be directed to one child at a time, while in school the large class is the unit nearly always; second, because in most schools there is far too little conscious attempt to train children in correct habits of speech. True, many teachers, more or less insistently, correct errors as the children make them, but in most schools the children in grade eight are making the errors made in grade four. In school we have long attempted to teach children to write and spell, frequently with gratifying results, but it has been done at the expense of oral expression. Considering that most adults write only to write letters and that seldom does one spell orally, while talking is the one thing everybody does, we have put the emphasis of our instruction in the wrong place. The ears are not tuned up to hearing their own errors.

Why Home Training is Necessary

The child's earliest training, then, is to hear good English. As early as he can be interested, read aloud to him. Begin with Mother Goose and keep right on, every night for years. No parent will have difficulty in finding suitable material, as scores of good reading lists have been published and hundreds of good volumes edited for just this purpose.

Reading Aloud, Story Telling

Acquire the art of story-telling, if you do not possess it. It is valuable training for both parent and child. As early as possible have the child

tell the stories read and told to him. Repeat until they are his permanent possessions.

Encourage him to play his stories. This is best done when there are two or more children habitually playing together. My little girl and her playmate have played at being everything from "a wild hop-toad" to colonists in Plymouth.

Memorizing selections from good literature adapted to children's taste, interest and capacity is a valuable aid in fixing habits of correct diction. Most children take to such exercise readily, and as they grow in ability get more and more pleasure from it.

Memorizing Good Selections

It was suggested above that many good stories should be retold until the child knows them; let us add, until he can repeat them. "To endear by repetition; to accumulate a stock of old familiar songs that graft themselves deep in the affections and reveal gradually, as the child grows, their music and meaning"—this is a worthy and attainable aim in every home.

Select for memorizing only prose and poetry that are good and worth remembering. Reject the puerile and "jingly." Such selections are found in too many school readers, although there has been a marked improvement in recent years. In nearly every public library can be found excellent compilations of verse and prose for home use with children.

Every parent wishing to train children in English will do well to study these books: *Self-Cultivation in English,* George H. Palmer; *How to Tell Stories to Children and Stories to Tell to Children,* Sara Cone Bryant; *Graded Poetry Readers,* Blake-Alexander; *The Teaching of English,* Chubb. (First eight chapters.)

The child's free self-expression is developed best by drawing upon his own personal experience. That is what the youngest child knows best and can talk about best. Imagination follows experience directly. Reproduction has to do largely with what lies outside of the personal experience of children, to things that they really do not know. Memory is the principal factor in reproduction. Experience and imagination have little to do with it. It is, therefore, the least profitable field for children's free expression, and should be sparingly used.

Oral composition, as the term is here used, means a great deal more than ordinary talking or conversation, which as often as not is fragmentary and disconnected. By oral composition is meant a body of connected speech, large enough in scope

Oral and Written Composition

to demand attention to its structure and form. Development will, of course, be gradual. But there will be no improvement at all, unless children are habituated from the first to be critical of their spoken English, in so far, at least, as the more flagrant mistakes in syntax are concerned, and the more fundamental matters of sentence structure and use of connectives.

When the child has learned to read and write, some time every day should be given to drill in speaking. For want of a better term we can call this oral composition. The aims

Drill in Speaking

of such work are stated in the preceding section. Just as soon as possible connect this with written expression. (See "Writing English," following.)

Remember that the vital thing to work for is correct habits of speech;

be watchful of errors, and pleasantly persistent in correcting them. When a child's ears are tuned up to hearing his own errors the battle for good speech is half won.

Mistakes Commonly Made

It may be worth while to note here a few common errors to be avoided. The parent who eradicates these from children's speech will be able to correct others as they appear.

1. In use of verbs:

sit and *set*
lie and *lay*
is and *are*
there is and *there are*
was and *were*
see, saw, and *seen*
do, did, done
draw, drew, drawn
throw, threw, thrown
show, showed, shown
eat, ate, eaten
grow, grew, grown
blow, blew, blown
freeze, froze, frozen
teach and *learn*
may and *can*
Use of *hadn't ought*

2. Pronouns:

(a) Nominative forms after *is, are,* etc., as *It is me,* for *It is I. It was her,* for *It was she.*
(b) Relative *who* instead of *whom* when used as an object.
(c) *Them* for *those.*
(d) Use of *yourn, hisn,* etc.
(e) When the personal pronoun is unnecessary in expressions such as *"John, he went."*

3. Use of double negatives, as:

I didn't do nothing.
I haven't hardly any.
I hain't got no knife.

4. Miscellaneous mistakes:

to home for *at home.*
yep or *yeh,* for *yes.*
what, as in *"The pencil what I brought."*
good for *well.*
don't for *doesn't.*
Improper or superfluous use of *got,* as "I haven't got the book."
Use of *ain't, hain't,* etc.
Use of *like* for *as.*
talkin', writin'

It may not be easy to train children in writing English in the home, but in many instances the difficulties are due more to a lack of plan and definite object than to inherent difficulties.

The child's thoughts often run ahead of his fingers, because he has to remember so many things. His attention is divided between what he wishes to write and the manner of writing, so that he attempts less than he can, and frequently would like to perform. Gradually he forms the habit of being satisfied with low standards of thought content, and manner of expression.

The mechanics of writing include: (a) Penmanship. (b) Spelling. (c) Punctuation. (d) Certain formalities regarding capitals, indentation of paragraphs, and the like.

Written expression should, during the early years, be based on oral expression. Seldom, if ever, should a child attempt to write anything he has not thought out and expressed orally. By training a child to talk in clear-cut sentences and then to write what he has spoken, his ear is trained, his power to express increases, his habit of thinking before speaking or writing is cultivated. Both in speaking and in writing, children frequently begin a sentence without knowing how it will end, or what is to come between the beginning and the end. This mistake should certainly be avoided during the time allotted for training in English. Granted that certain technicalities must be mastered and require constant drill, never lose sight of the fact that the most important aim in writing is to have something to say, and to say it in a way that will interest the reader.

First Oral, Then Written Expression

Things that happen in the home, in the school, on the playground;

the life of his pets and his life with his pets; things the child observes about plants and insects in Nature Study, in school or home gardening; the books he reads, the books his mother reads to him and the things read aloud to the class in school, the lessons in History and Geography—all these furnish subjects for expression, oral and written, and the inspiration to express.

The study of pictures, now so common in the schools, is another rich source for composition material. Let the child tell in words what the pictures say to him. Select pictures where the interest centers around two to five individuals. They should be pictures of action, showing people doing things which the child can readily understand, and should be large enough so that all the members of the class can see it. One picture may be used for an entire class, or there may be a number of pictures. Vary the method. Where all express what they see in one picture, there are valuable opportunities for comparison in observation and expression. The use of several pictures gives variety.

The best way to teach children penmanship in the home is to provide wall space for a blackboard and charts, supply chalk, paper and pencils, encourage them to imitate models, and answer their questions. A blackboard with script alphabet at the top can be purchased at small cost. Two charts, one with capital letters in script, about four inches tall, the other with small letters of proportionate size, can be bought of any school supply house. Keep these before the child daily, let him refer to them constantly, encourage him to write, and he will soon memorize the letter forms and acquire reasonable skill in using them.

Aim Only at a Good Plain Hand

Unfortunately great numbers, possibly a majority, of children taught in public schools have come to regard writing English as an irksome task, because of too great insistence on penmanship of particular quality or style. Legible handwriting is desirable for everybody; "copy-book" standards are of small value to anybody except those few people who earn a living as clerks and copyists. If such standards are needed in one's daily work, they can be attained by concentrated, specific training for that purpose, but to demand them of all children, knowing full well that little folks cannot attain them except at a sacrifice of vastly more important ends, is absurd.

Handwriting is largely a matter of muscular control. The degree of control necessary to approximate copy-book standards can be obtained in children between six and twelve years of age, except in rare instances, only by extraordinary care and patience. Every parent knows the awkward age between twelve and sixteen; often a period of rapid growth, the muscles lengthen rapidly, the child cannot co-ordinate his movements, and painfully acquired accuracy in handwriting is frequently lost. Don't try to force adult standards on immature children.

Learning to Spell Well

Most of the standard reading systems have a teachers' manual giving sufficiently plain directions for teaching to read, and for work and sentence building, by using cut letters and words. Such material is inexpensive. Assuming that the child can read, he will, from his reading, automatically memorize the sequence

of letters in many simple words.

Bearing in mind the fundamental principle that the child should form the habit of writing only what he has thought out and expressed orally, good spelling habits can be formed by adhering to this simple rule:

Drill on words the child uses naturally and spontaneously in his oral preparation for writing.

Coincident with learning to read, the child should learn to write script letters, and write them in words from copy on the blackboard. A little time—not too much—can well be spent in copying short sentences. Soon the child will learn that every sentence begins with a capital letter and has some sort of mark at the end.

With these preliminaries mastered, the child is ready to learn to spell, and express his thoughts in writing. Oral spelling is of little value; we need to spell in order to write. Memorizing word lists is of questionable value, for the child may be wasting time on words he does not need in writing.

Writing words in lists has only one thing in its favor. It is said to save time, but this claim is open to question, and, in any event, a wise use of time is the sensible consideration. Try this method. Have the child dictate three sentences. Write them on the board. Point out difficult words, and the difficult syllables in them; underline these with colored chalk. Remembering the advertising principle of keeping things constantly before the eye, let the sentences remain on the board until the next lesson. Then cover the board with a cloth, and redictate the sentences to the child for writing. Have him compare his results with the original sentences, finding his errors, if any. Help him to memorize the correct form of any words on which he has failed at the first writing.

How Color Aids Memory

Have a package of blank cards on which to write every day the misspelled words. Hang these beside the blackboard. These are the "ogres" that our young "Jack the Giant-Killer" must conquer. He will do it, and in a year's time, given six minutes of drill a day, will have built up a right *habit* of attacking a new word.

Gradually introduce the method of testing his knowledge by dictating a sentence or two, using words on which he has previously failed; if he fails again, hang up this card for another "fight."

If the cards are arranged in a box alphabetically, the child will soon learn to refer to them, if he needs to use a word in writing, and is not quite sure of the spelling. This search for "lost treasure" will be the beginning of the dictionary habit.

Principles Summed Up in "Don'ts"

A few "Don'ts" may help in mastering a reasonable writing vocabulary. Don't expect a child to spell every word he can recognize in reading. Don't attempt to drill on words he seldom uses in writing; it is better to tell him how to spell an unusual word if he wants it. Don't select spelling words from his reading vocabulary; wait until he uses them in speaking. Don't refuse to tell him how to spell any new word he wants.

In a recent study of children's spelling, these conclusions were reached:

1. Students in the highest grade

of our common schools have, on the average, less than 2,500 words in their writing or spelling vocabularies. We are giving children words they do not use, and we are not teaching them to spell the words they do use.

2. The words which give most trouble in spelling are found, almost without exception, in the writing vocabularies of the lower grades; and since these troublesome but useful words are not pointed out and effectively dealt with in these early grades, our handling of the most dangerous spelling material is not efficient, and students go on misspelling, year after year, words that should be mastered in the early school years.

Catch the Errors While Young

Since grade students commonly use from 500 to 2,500 words in writing, yet on the average misspell about fifty words, *not one child out of a thousand misspelling as many as one hundred words,* our spelling problem is not so gigantic as it is commonly believed to be, for the reason that a handful of words misspelled over and over by each student has misled us in our judgment.

How to Master Punctuation

By imitation of sentences in his reading book, and from blackboard copy, the child soon learns that at the end of every sentence is a mark. During the first year of home study he can learn to use the period and interrogation point without error. After that the teaching of punctuation should be governed by the need of it in written work.

Discuss the punctuation marks he finds in his reading. Let him answer this question: "What does that mark tell you to do?"

The child can learn early to sense the need for punctuation by this simple rule: *Some mark of punctuation is needed when one naturally makes a pause in reading aloud what is written.* This "sense" can be readily transferred to his writing, for before he writes anything, he composes it orally, and always he should have in mind that what he writes, somebody is going to read.

Simple Guide to Punctuation

During the early years, punctuation is largely a matter of developing this sense. When the child is old enough to need a variety of punctuation, one of the most useful devices is to dictate several sentences from a standard author, carefully phrasing according to the marks given. Have the child compare his writing of this dictation exercise with the original, and discuss with him any differences he finds in his punctuation.

"Why did the author punctuate in his way? Why did you punctuate in your way?"

A book on composition should be at hand for constant reference.

Fixing the Paragraphing Habit

When a child writes more than one sentence, he should become conscious of the paragraph. Study the reading book. When he writes, have him use a *margin paper* prepared as follows:

Fold a sheet of drawing paper one and one-half inches from the left hand edge. Fold again so that the left hand edge meets the crease. Let the child place his paper in the fold, so that the left hand edge meets the crease of the long fold. This gives the correct margin for the first word of a paragraph; similarly the short fold gives the margin for the following lines.

After using this device a year the habit of indentation will be fixed.

An Outline of Work

The following suggestions should be varied as need appears in written work. In listing, the writer has had in mind that while many of these things are to be mastered in usage and habit, at some time the child should learn the reasons for the usage.

First Stage. Capitals: Beginning of sentence. Pronoun *I.*

Punctuation: Period, interrogation point.

Verbs: Correct use of *is* and *are; was* and *were.*

Second Stage. Capitals: Names of persons, places, days of week. Word *O.*

Punctuation: Period in abbreviations given below. Interrogation point.

Abbreviations: Mr., Mrs., St.

Plurals: Ordinary formation by adding *s* and *es.*

Verbs: Correct use of *see, saw, seen.*

Third Stage. Capitals: First line of poetry. Names of months.

Punctuation: Apostrophe in possessive singular. Period in abbreviations. Hyphen at end of lines where a word is left unfinished and only at the end of syllables. Comma and periods in dates.

Abbreviations: Names of months. Doz., lb., qt., in., ft., yd., ct. or c., $. Certain states—begin with native state.

Address: Pupil's own address with correct punctuation.

Plurals: Few irregular plurals, such as *mouse, mice; loaf, loaves.* Avoid special difficulties.

Possessives: Possessive singular. In the best usage, the possessive singular of such words as James and Dickens is formed regularly as James's and Dickens's, unless the word following begins with *s*: *James's book,* but *James' sister.*

Verbs: The correct use of the following irregular verbs: *draw, throw, show, ring, sing, blow, grow, break;* also the use of *you were, there is, there are, there was,* and *there were.*

Pronouns: Nominative form of personal pronoun after verb *to be.* Emphasize this particularly. Have the children repeat the correct forms, as "It is I," "It was she who told me," etc., until the correct forms become a habit.

Fourth Stage. Capitals: Names of the Deity, the words *Bible,* etc.

Punctuation: Comma after word *O.* Comma in address. Comma before short, direct quotations. Quotation marks in simple, unbroken quotations. Period in abbreviations. Exclamation point.

Abbreviations: No., sq., ft., yd., pk., bu. bbl., A.M., P.M., M., U. S., Co., Rev., Dr., R. R., E., W., N., S. (for points of compass), etc.

Addresses: Of other people.

Possessives: Possessive plurals.

Plurals: Boy, and the rule for such words; lady, and the rule for such words, together with all plurals.

Contractions: Explain how contractions are formed. *I'll, isn't, aren't, wasn't, didn't.* Emphasize distinction between *don't* and *doesn't.*

Verbs: The correct use of *sit* and *set, run, wear, drown, tear, come, buy, do, give, write, freeze, has* and *have.*

Use of words: *Their* and *there, may* and *can, got* and *have, in* and *into.*

Pronouns: Correct use of the order of personal pronouns.

Syllabication and Accent: Division of words into syllables; accent marks.

Fifth Stage. Capitals: Words *North, South,* etc., used as a part of the country and not simply as points of the compass.

Punctuation: Comma in series. Comma after *yes* or *no* in an answer. Hyphen in compound words.

Abbreviations: Acct., G. A. R., Gen., Col., Capt., Supt., Jr.

Plurals: Nouns like *hero, potato, negro,* etc. Compound words such as *son-in-law.* Words ending in *f* or *fe* changing to *ves.* Other irregulars, as *mouse, man, woman,* etc. Avoid special difficulties.

Contractions: Use of *couldn't, wouldn't, shouldn't, mustn't, we've, 'tis, I'm, they're, they'll, mustn't, hasn't, haven't, hadn't* and *isn't.*

Verbs: The correct use of *drink, sink, swim, go, lie, lay, come, think, take, shine hurt, lose, shake, teach, show, rise, raise, beat, eat, bring* and *swing.*

In such verbs as *drink, sink, sing, swim,* the best usage confines the forms in *a* to past tense and those in *u* to the perfect.

Correct use of the subjunctive forms: *If I were, if it be.*

Correction of the expression: *I didn't get to go.* Correction of such expressions as: *He didn't work like I did. Like* should be followed by a noun or pronoun only, never by a clause; *as* should precede a statement. Emphasize this distinction.

Possessives: Possessives, as in *Mason and Dixon's Line, Webster's* or *Worcester's Dictionary.* Synonyms.

Quotations: Quotations within a quotation. Make use of readers and other books.

Pronouns: Review carefully: Personal and relative after common prepositions: after transitive verbs. Emphasize the use of *between you and me,* etc. Correct use of *those* for *them.*

Dictionary Study: Begin use of dictionary and teach: (a) Pronounciation of words by means of diacritical marks and use of pronouncing key. (b) Division of words into syllables; accent marks. (c) Definitions. Show that many words have more than one meaning. Have pupils illustrate the meanings of words in interesting original sentences. In each spelling lesson mark one word diacritically.

Names: Teach distinction between Christian names and surnames.

Keep the Child Interested

At the outset I said: "Speaking and writing are easy when one has a motive or purpose in expressing his thoughts." This is equivalent to saying that the child must be interested if the best results are to be attained. The method of getting interest must be adapted to the nature of the child; some are susceptible to praise; some want to emulate an older brother or sister; some can be reached by introducing the game element; and one child I know well works hard from a variety of motives, not the least of which is that she wants to postpone the day of school confinement as long as possible. Whatever motive you can find, use it. My children have learned to write correct notes of invitation by giving Christmas and Hallowe'en parties to the other members of the family. You may be sure that they require equally correct acceptance. When I am traveling, they write interesting letters. "Having something to say" produces vastly different results from "Having to say something."

A six-year-old child can, by following the oral and written drill methods suggested, learn to write three or four sentences that are correct in structure, and have some interesting quality. By the time he is nine years old, he can tell a connected story of several sentences, and arrange them for writing in an order that will best command the interest of the reader. He can be trained to be self-critical. A compact, well-constructed paragraph, showing due attention to sentence structure, choice of words, and the technical details above mentioned, is a reasonable assignment for a child of twelve. When a child appreciates that good writing is not "how much" but "how well," and knows the qualities that make up the "well," he has advanced beyond many graduates of elementary schools.

The Rapid

All peacefully gliding,
The waters dividing,
The indolent batteau moved slowly along;
The rowers light-hearted,
From sorrow long parted,
Beguiled the dull moments with laughter and song:
"Hurrah for the Rapid! that merrily, merrily
Gambols and leaps on its tortuous way;
Soon we will enter it, cheerily, cheerily,
Pleased with its freshness, and wet with its spray."

More swiftly careering,
The wild Rapid nearing,
They dash down the stream like a terrified steed;
The surges delight them,
No terrors affright them,
Their voices keep pace with their quickening speed:
"Hurrah for the Rapid! that merrily, merrily
Shivers its arrows against us in play;
Now we have entered it, cheerily, cheerily,
Our spirits as light as its feathery spray."

Fast downwards they're dashing,
Each fearless eye flashing,
Though danger awaits them on every side;
Yon rock—see it frowning!
They strike—they are drowning!
But downward they speed with the merciless tide:
No voice cheers the Rapid, that angrily, angrily
Shivers their bark in its maddening play;
Gaily they entered it—heedlessly, recklessly
Mingling their lives with its treacherous spray!

CHARLES SANGSTER

Handwork for the Little Folks

This is a chariot race between Teddy Bears. Isn't it exciting? The bears, the chariots and the horses are all the work of children of the Second Grade in the schools of Pasadena, California. The race was originally run on a table in the schoolroom, but our artist, with a few deft touches, has transformed the table into a field, and that makes it look still more real. But just imagine how vivid the chariot races, in their stories of ancient days, must be to the children themselves after they have worked out a scene like this.

"EDUCATION is that which changes our behavior," says Dr. Thorndike. If we are to succeed in directing a child's education upward along good lines, we must accept him as he *is,* and to the best of our ability make the influences for good more attractive to him than the influences for evil, that his behavior may improve.

Meaning of the Child's Busyness

When we accept him *as he is,* how do we find him? His most striking characteristic is his activity. He must always be doing something. He calls it play, but he puts forth tremendous energy, and works harder at it than many of his elders work at their daily tasks.

What sort of things does he do when left to play freely and naturally? To a very large extent, he is imitating what he sees done by his elders. He is riding a horse or running a locomotive or street car. He is building a house or making a store.

His great business is getting acquainted with this big, wonderful world, and he is full of curiosity about the things he finds in it. What are they? What will they do? What can he do with them? He examines and experiments. He likes to see what will happen if he drops a stone or a stick into the pond. He likes to test his own power. How fast can he run? How far can he throw? How large a nail can he drive and how straight can he drive it? These are all natural and

legitimate occupations and desires. Rightly directed, they help him grow in the right direction. Undirected or misguided, they may turn into mischief. In a desire to be like father, he may carry his best cane and lose it; or he may drive tacks in mother's choicest chair.

Mischief or Mental Growth

Experimentation with all sorts of tools, materials and processes is essential if a child is to find himself, to know what he can do, and discover his niche in the world. Experimentation implies freedom, but freedom in the educative process does not mean unguided, unrestricted liberty in purposeless activity. It means, rather, that when his ideas and purposes are worthy, he shall be allowed to go as far as he is able in executing them, that he may feel the intense satisfaction and sense of power that goes with saying: "I did it all by myself." It means, that when his ideas fail or are unworthy or impractical, help shall be given by way of suggestion, just as when he is learning to walk we help him to his feet when he falls, but we do not carry him. It is just as needful for him to *go alone* in his thinking and doing as on his feet.

In the Sugar Camp

Here's another fine example of how well children can make their own "pictured knowledge"—this scene illustrating the work of the sugar camp. And how nicely it will fit into our story of sugar. This work was done by Third Graders in Columbia, Mo. The grass is real; transplanted into the sand. And that is a cake of real maple sugar on the table. The kettles and the horses are made of clay. The kettles are held up by tripods of matches. The buckets are of paper and they are catching imaginary sap from maple trees of twigs. The houses are of wood with a paper roof. That cute little ax is made with cardboard and is fastened in a log made from a piece of wood which was split at the end to make it easy for the little ax to pretend it did it!

Relation of Toys to Education

Many parents, in the desire to keep children employed, provide them with quantities of expensive toys and are surprised and grieved when the toys are abused and broken, or when the children soon tire of them and ask for new things. Others, wishing to avoid the selfishness and carelessness that often develops when desires are too easily gratified, go the other extreme, and provide little or nothing in the way of playthings. Of the two, the child, who has too little, is probably better off than the one who has too much; but an intelligent use of the common materials easily obtained in any home, and above all, a sympathetic inter-

est in, and encouragement of, the child's crude efforts will, in most instances, strike the desired happy medium between the two extremes. If we will take the trouble to study the child's tendencies and interests and provide a legitimate field for them, many mischief-making habits may be avoided and useful habits developed in their stead. Children can be taught to make pictures in their own scratch tablets, and not on the walls or in valuable books. They can be taught to drive nails and saw boards that are provided for the purpose, and not cut cherry trees, or hack furniture. The *teaching* is quite as necessary as the supply of materials to work upon, but will be easier and more effective because of them.

Making vs. Breaking of Playthings

Paper and scissors, paints, crayons and paste, may be made to produce wonderful pictures and satisfy several childish needs at the same time. Empty boxes may be turned into fine houses and attractively furnished through the use of odds and ends of paper and cloth, which usually find their way into the waste basket. The sandbox, whether indoors or out, has infinite possibilities and offers a big field for imagination and ingenuity. Homemade toys have a double value. The process of making is as much fun as playing with them later.

Picture Making and Paper Cutting

Every child loves pictures and picture books. The desire for them is seldom fully satisfied. Good pictures play an important part in the educative process. The story is more easily understood and becomes more educative through the use of pictures. The child's attempt to make illustrations for stories of all sorts still further deepens impressions, and thought is clarified through the attempt to express. The gain in this particular cannot be measured by the quality of the result, according to our adult standards. Often a very poor picture may represent a real triumph in thought and expression on the part of the maker, a deepening of impression, a growth of imaginative power.

Paper cutting is less used and less understood than either drawing or painting, and yet has many points of advantage over either of these. Free hand cutting means cutting out objects directly without the use of

Work and Days

A long time ago there was a Greek farmer named Hesiod who wrote a poem called "Work and Days," in which he told of a farmer's life, by days and seasons. Here we see how some little artist poets in the Third Grade told of work and days at home: Monday, washday; Tuesday, for ironing; Wednesday, sewing; Thursday, callers' day; Friday, sweeping; Saturday, for baking the cookies and things. On Sunday, of course, everybody goes to church. All the figures are cut out of paper and neatly mounted on a card.

a pattern, outline drawing, or other help. Its value lies in the necessity for the worker to see with his mind's eye what he wishes to make, which is what the psychologist calls "to visualize," a very important factor in clear thinking. Repeated attempts to express the mental picture in form and material which the child can understand will help to strengthen power, both in thought and expression, especially if some one is sympathetic, and while admiring the crude result, drops a suggestion for its improvement. For example, the child brings, in triumph, a bit of paper, and says, "See the man I have cut." The cutting may show nothing but an abnormally large head and appendages that suggest legs, but it indicates that the "big, blooming, buzzing, confusion" of his impressions of the world is beginning to take on some system and order. If instead of laughing at his crude attempt, we say, "Your man has fine legs, but where are his arms?" his next attempt will show the additional members. By continuing the process of encouragement and suggestion, the little one is led happily on to better and better results.

Advantages of Paper Cutting

How Much a Few Words Will Do

If, on the other hand, in our anxiety for more rapid progress and apparent results we *help* by doing the work for him, by cutting a good man for him to use as a pattern, we *hinder* in so far as we make him lose his feeling of independence and begin to lean upon us. Continued, this method blights the bud of his originality and inventive genius, and makes him afraid to think any thought for himself, until he finds some one else who has expressed it first. We hinder his development also by substituting *our* paper pattern for *his* mental picture of man. The paper cutting in itself is of small importance. The mental picture is all-important.

This Kind of Help Does Harm

Some mothers object to paper cutting because it sometimes litters the floor, but this is not a necessary accompaniment to the work. Cleaning up is almost as much fun as any other part, if it is just a part of the game, and there is no reason why it should not be treated as a game. Children coax to be allowed to do many things we call disagreeable tasks until they find how we regard them, and then, very naturally, they imitate our opinions as well as our actions. Making play of disagreeable jobs helps a great deal with little folks and big ones, too. Emerson points out that we all do our best "easily and in sport."

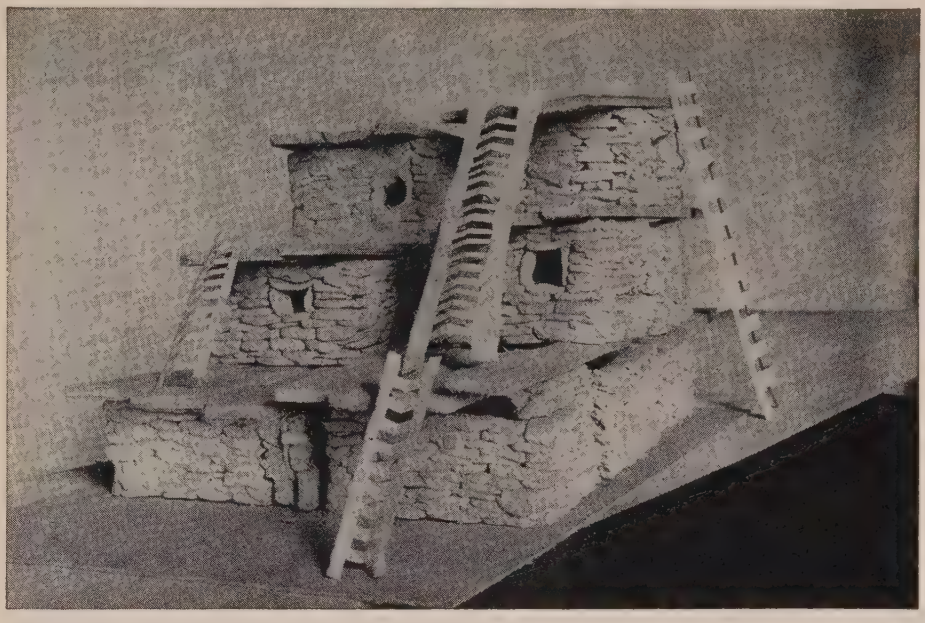
Making Duty Attractive

Paper cutting, brush work and colored crayons may be used to make posters and scrap books illustrating the stories the children read, the flowers, birds and animals they learn about and the things people do at home and elsewhere.

Use of the Sand Box

Sand box projects are an extension of the same principles underlying picture making. They have been called "pictures in three dimensions." All sorts of ideas may be worked out in the sand; illustrations for stories read, scenes showing foreign peoples, as well as interesting subjects nearer home. The sand pile offers equal, if not greater opportunity, for developing the fundamental instincts outlined above in connection with picture-making. It

Homes of the Pueblo People



Some Second Grade children learned and then told each other a story of a little girl named White Cloud who lived in a pueblo. A pueblo, most of us know by name, was an Indian village made of sun-dried bricks, where the houses are grouped together on the side of a hill in terraces like this. But no matter how old we are, we don't know a pueblo as did the children who built this one with their own hands and made the bricks and the ladders and all. "Learning by doing" is one of the greatest principles in the modern method of teaching.

amuses, perhaps, but does not especially benefit a child, to look on while some one builds castles and forts for him. Playing *with* him is helpful, provided the adult playfellow does not take the lead too much and relieve the child of the need for thought, or cheat him out of his chance to grow through the effort to overcome difficulties.

The crude thing he does all alone may be worth more than an elaborate thing he helps some one else to build. This is not to put a premium on crudeness, but rather upon independence and resourcefulness, and the children should always be encouraged to do their best and discouraged in wilful carelessness.

It is almost invariably true that the child, who works freely on the level of his own development and appreciation, is conscious to a great extent of the weakness of his work. He will tell what it lacks, and how much better he could have made it had proper time and material been available. Knowing what is wrong is a long step toward getting a thing right. Under more closely directed work, a child often obeys directions and corrects mistakes without knowing why they are mistakes.

Building a Playhouse

Building a playhouse is an excellent project in the winter months, for either home or school. A house project may take on as many varieties as real home life presents. It may be a playhouse pure and simple, or it may represent some special

Little Architects and Their Playhouses

All over the world and as far back as history goes, we find children have delighted in house building, house furnishing and house keeping. Only in recent years, however, have our educators seen the wisdom of allowing this instinct to have free play in school. But to be truly educated the children must do the work themselves. This picture shows a child-built house. The rooms are made of boxes with connecting doors carefully cut so the openings match; wall paper (scraps donated by a local dealer) carefully selected and much discussed as to color combinations and border designs; floors covered with rugs or matting made by the children, or linoleum, according to the purpose of the room.

The Schooling in a Playhouse

phase of home life, as the homes of foreign children, or of story-book friends. It may consist of one or more small boxes set on table, shelf or floor in the play room; or in the summer, big boxes that the children can play in may be used. In any case it will furnish much profitable employment, and in school may serve as a means through which many valuable facts and some otherwise dry information may be connected with the real life of the child and taught in a vital way. The character of the house may be suited to the age and interests of the children, varying from a playhouse for the Three Bears to a model in house furnishing, planned by the larger girls.

Use clean, empty boxes of wood or corrugated paper. Arrange these in convenient form on table, shelf or floor.

How to Do the Building and Furnishing

Plan and saw out windows and doors. In wooden boxes bore holes at the corners of windows and saw out with a keyhole saw. In paper boxes the openings can be cut with a sharp knife. In school this part of the work forms an excellent reason for learning to measure.

After the doors and windows are cut, the walls may be papered. Plain papers are best, as any patterned paper is likely to have figures much too large for the small rooms. Borders may be planned from paper cuttings or crayon designs.

Rugs may be woven for the floor on home-made weaving frames, as shown in the illustration. Carpet rags are in many respects more satisfactory than the weaving materials sold for school use, and cost practically nothing.

The most satisfactory furniture is made from scraps of wood. A square block with a thin strip nailed on makes an excellent chair. A larger block and a taller strip will make a fine dresser if a bit of tinfoil

The Work of the Loom

You see now where the "imported" rugs used in that dear little playhouse came from, don't you? The children made the looms, too. For the more complicated loom on the left, to be sure, they had the help of boys in the Manual Training classes, but the other one was "easy" and the little folks did every bit of it. They drove nails a quarter of an inch apart at the end of a shallow box and stretched the warp threads across the open top. That's all. And do you know what those smallest rugs were woven on? A little loom made of just a piece of cardboard, by punching holes on opposite sides and stringing the warp through them.

is used for a mirror, and drawers indicated with pencil lines. Tables, beds, piano, stove and all necessary furniture may be worked out by this means, giving ample scope for a child's inventive genius, and free play for his imagination, while meeting his need for activity in a way that appeals to his interest.

The making of bedding and draperies calls for some sewing. Simple stitches may be learned on small pieces that do not tire little fingers.

Clay may be used to model bathroom and kitchen furniture. Clay-modeling has so much value, and is so fascinating to children, while its cost is practically nothing, that it is surprising so little use is made of it, in either home or school. Plasticine and similar preparations are a little more convenient to use in some ways, but are more or less expensive. Clay should be kept in a covered earthen jar or enameled can. If a wet cloth is kept on top of the clay, it will remain at a workable consistency indefinitely.

Supplying a Family for the House

After the house is finished, dressing a family of small dolls to live in it will add greatly to its interest and to interest in learning to sew as well.

Throughout the house-building process, the choices made by the builder will give a hint as to the level

Life on the Sand Table Farms

This modest little farm house with its out-buildings, fences, animals, and all, was planned and built by children in the Second Grade in Columbia, Missouri. And they grow real crops on these sand table farms. The sand must be very wet before the seed is put in and sprinkled twice a day; for these little farms are as thirsty as the Sahara. After the roots once get started, however, they find enough moisture down in the sand. In this way you can keep your farm green for several weeks and have corn, wheat, oats, barley, timothy, blue grass, and clover all growing.

of development in appreciation of color and ideas of form, and will indicate the point at which teaching is needed. Suggestions at the right moment have great influence, and the incidental development possible is limited only to the wisdom of the mother or teacher who supervises the work.

Valuable Guides for Teaching

Rich Stores in the Little Stores

Play stores may be built on the same general plan as the playhouse, using empty boxes and stocking them with make-believe merchandise or with real samples. Playing store will help to familiarize the children with weights, measures, money, and business customs. Any activity, in which children take a keen interest, may serve as the starting point for pictures, playhouses or sand box projects. Sympathetic encouragement in working out their ideas, and helpful suggestions at the right moment will often bring results that surprise us by their ingenuity.

How to Knit

THIS charming little girl is knitting an afghan for her grandmother. She is using the plain knitting stitch.

You can soon master this stitch and be able to use it for knitting all kinds of attractive, practical articles.

FIG 1

The first step in learning to knit is to make a loop with the yarn like Fig. 1 and slide the loop on a knitting needle, Fig. 1. Hold this needle in your right hand and bring the short end of yarn over the first finger, holding it in place with the second and little finger, Fig. 2. Now carry the long end of yarn to the far side of the first finger of your left hand, pass the yarn around the finger, then across over and of the needle in front of the loop. Next bring the yarn down and hold it with thumb and first finger of left hand, Fig. 2.

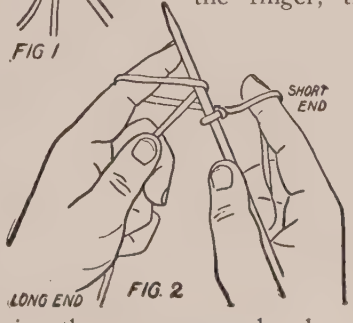


FIG. 2

Slip the yarn which is on the first finger of your right hand up over the needle, Fig. 3, with your needle bring

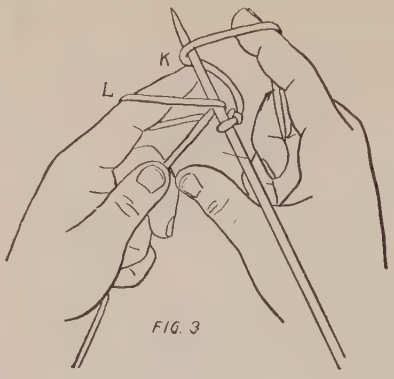


FIG. 3

the loop K, Fig. 3, down through the loop L, held by the left hand Fig. 3. Draw this stitch entirely off the left hand onto the needle, leaving the left hand free.

Make the second stitch by carrying the long end of yarn around the first finger of left hand exactly as you did when making the first stitch and slipping the needle through as in Fig. 2; then bring the yarn on first finger of right hand up over the needle Fig. 3, and through the loop on first finger of left hand Fig. 4; pull the stitch through while sliding the yarn off the left finger. Cast the third stitch in the same way and continue to cast stitches until you have the requisite number.

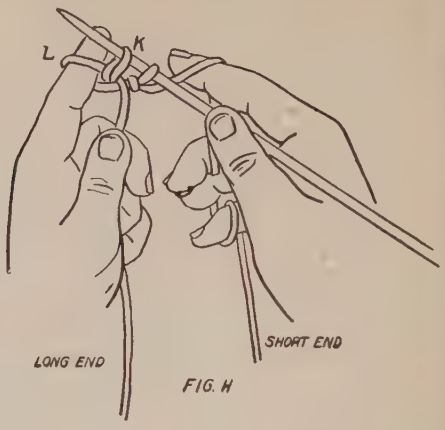


FIG. H

Fig. 5 shows the first nine stitches cast on knitting needle. For the next row of stitches, take the needle in your left hand and in the right hand hold the empty needle.

Slip the right-hand empty needle into the first stitch M Fig. 6, and with the first finger of your right hand pass the yarn over between the points of the two needles; then pull it down through the stitch M Fig. 6, with the right-hand needle. Doing this gives the first stitch of the second row, and the stitch will be on the right-hand needle. Again slide the right-hand needle into a stitch on the left-hand needle and knit it over on the right-hand needle in the same way you knit the first stitch of the second row.

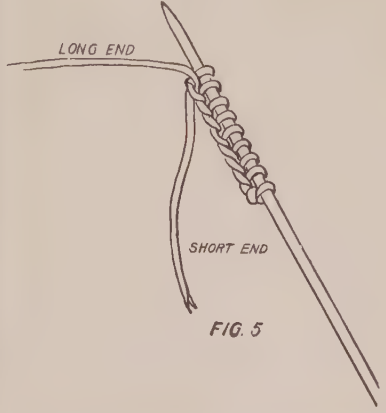


FIG. 5

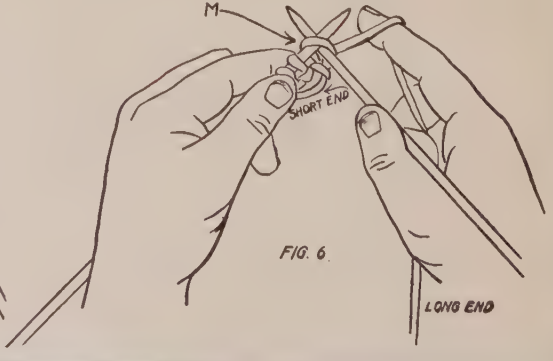


FIG. 6

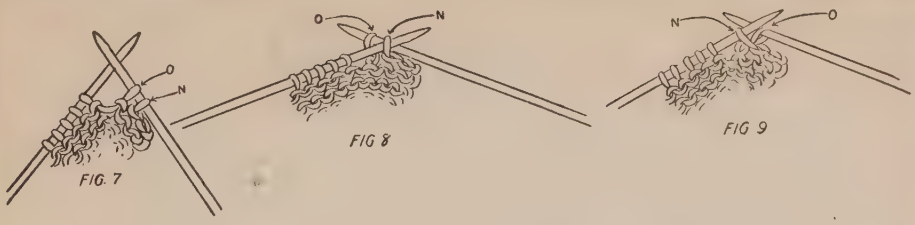


FIG. 7 FIG 8 FIG 9

Repeat this process until all the stitches are on the right-hand needle, then take the needle containing the stitches in your left hand, the empty needle in your right hand and knit the third row of stitches. Continue in this way until the strip is finished.

How to Bind Off

Knit two stitches from the left-hand needle to the right-hand needle N O Fig. 7. With the left-hand needle take up the stitch N Fig. 7, and Fig. 8, and while N still remains on the right-hand needle and is also on the left-hand needle, pull the stitch O through the stitch N with the right-hand needle, at the same time slide the stitch N off the left-hand needle; this will leave one stitch on the right-hand needle.

Again insert the right-hand needle into the top stitch on the left-hand needle and knit a stitch over on the right-hand needle, which gives you a second stitch on the right-hand needle. Now bind off the second stitch precisely as you bound off the other one. Knit a stitch and bind a stitch, knit a stitch and bind a stitch. Do this over and over again, always remembering that only two stitches must be on the right-hand needle and when one is bound off you knit on another making the necessary two. Proceed in this way until all stitches are bound off. When only one stitch remains draw your yarn through and break it off.

Purling or Seaming

To purl or seam means to make ridges as in the top of mittens, stockings, etc., and this is the way to do it. With all stitches on the left-hand needle, begin purling by first slipping the first stitch off the left-hand needle onto the right-hand needle without knitting. Knit the second stitch and you will then have two stitches on the right-hand needle. The third stitch you must purl. Bring the yarn in front of the right-hand needle P, Fig. 10; then slide the right-hand needle in front of the left-hand needle and through the stitch Fig. 11. Carry the yarn in front of and up over the right-hand needle, bringing the yarn P, Fig. 12 entirely around the right-hand needle. Hold it in place with the right hand as you held the yarn in Fig. 3, while with the right-hand needle you bring the yarn up through the stitch held open by the two needles and carry it over on the right-hand needle, which will give three stitches on that needle. Now bring the yarn back of the needle and plain knit one stitch; then carry the yarn in front again and purl a stitch, bring the yarn back and knit a stitch, keep on purling a stitch and knitting a stitch, never forgetting the yarn must be *in front* of the needle for the purl stitch and *back* again before making the plain

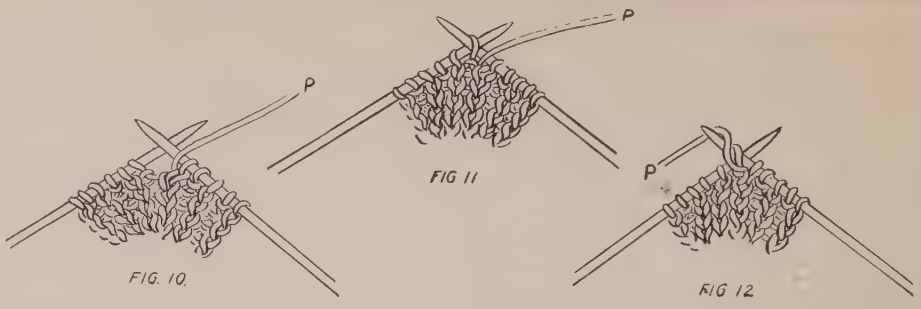


FIG. 10. FIG 11 FIG 12

knit stitch shown in Figs. 7, 8 and 9.

To Narrow

Knit two stitches together as one stitch.

To Slip Stitch

Slide the stitch from one needle to the other needle without knitting.

To Increase Stitches

Knit the front of the stitch and leaving the stitch on the left-hand needle, knit the back stitch; this gives you two stitches in place of one.

Using merely the plain knitting stitch and two knitting needles, you can make for your mother a long-sleeved sweater, kimono shape, sewing up the sleeves and sides after you have finished the knitting.

Commence by casting about 70 stitches for back of sweater, knit 74 rows; then cast on 40 stitches for the sleeve, knit across and on the opposite end cast on 40 stitches for the other sleeve. You now have 150 stitches; knit across these 44 times, then knit 65 stitches and bind off 20 stitches for the neck; again knit 65 stitches. Thread a string through the first 65 stitches until you need them.

Knit two rows for the shoulder, after which increase 1 stitch at the front on every other row for six rows and you will have added three stitches. Now cast on 8 stitches at the front and knit 44 rows; then bind off 40 stitches for sleeve. Knit the remainder until this half front equals the length of the back; then bind off, and knit the other half front to match. With over-and-over stitch sew up the sleeves and sides of the sweater.

Knit a border of contrasting colored yarn, shaping the border to fit the edge of the sweater, and sew it

on with over and over stitch.

A turban is made like a short scarf; fold this scarf across the center, sew the two edges together and it forms a bag. Turn up the bottom; then bring down the corners of the top, fasten each corner on the turned up edge and cover the spots with a yarn pompon.

Knit the scarf as wide and as long as you wish it and fringe the ends.

Knit some toy horse reins 1½ inches wide and trim them with sleigh bells for the baby brother.

How to Crochet

WHEN you know the simple crochet stitches, you can make dainty lace as the little girl in the picture is doing. She has stopped a moment to show her little friend how to hold her thread.

You start crocheting with a loop like Fig. 13; the next step is to place the crochet needle over the loop and under the long end of yarn which lies across under the loop, Fig. 14, then holding the loop in the left hand, with the right hand you catch the long underlying yarn with the hook on the crochet needle and pull the yarn through the loop, Fig. 15.

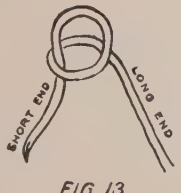


FIG. 13

FIG. 14

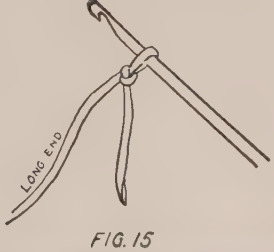


FIG. 15

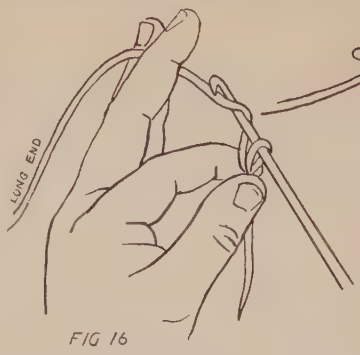


FIG. 16

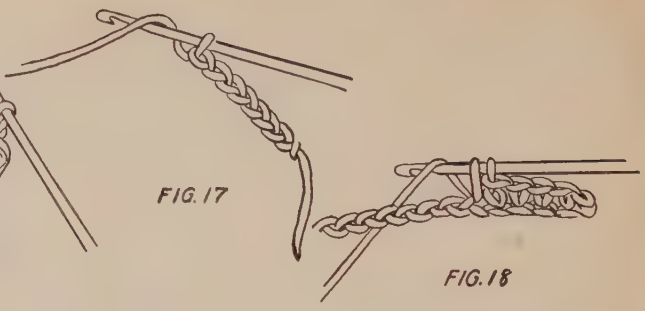


FIG. 17

FIG. 18

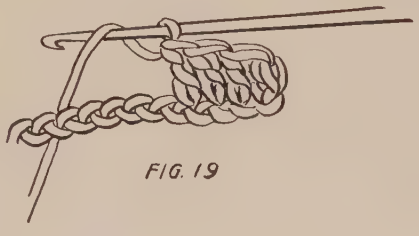


FIG. 19

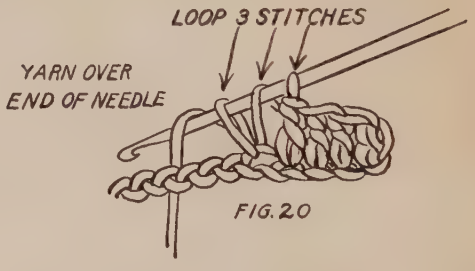


FIG. 20

Having the first loop, it is easy to pass the yarn under and back of, then over the needle Fig. 16, and pull the yarn through the first loop. This makes another loop.

Repeat many times, crocheting a series of loops which form the chain stitch. The chain stitches are the foundation for crocheting Fig. 17.

With the last loop of the chain on your needle, begin to crochet the single stitch Fig. 18. Turn back and pass the needle through the next chain stitch, then bring the yarn over the needle as in Fig. 16 and pull it through the chain stitch, which makes two loops on the needle Fig. 18. Carry the yarn over the needle Fig. 18 and pull it through the two loops. With the one loop now on the needle, again pass the needle through the next chain stitch and crochet another stitch as before.

Long Stitch

With the end loop of the chain stitch on your needle, pass the yarn around the needle as in Fig. 16; then while the needle still has the yarn around it Fig. 19, slide the hook through the next chain stitch, pass the yarn over the end of the needle and with the hook bring the yarn through the chain stitch. This gives you 3 loops on the needle. Now carry the yarn over the end of the needle Fig. 20 and draw it through the first two loops, making only two loops now on the needle; carry yarn over needle and bring it through these two loops, then do it all over again to make your second long stitch, as shown in Figs. 19 and 20.

"IN THE PAGES OF GOOD BOOKS
LIES THE MAGIC TO INSPIRE OUR
DREAMS AND THE POWER TO MAKE
THOSE DREAMS COME TRUE"

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